
MANUFACTURES



CHAPTER 15.—STATISTICS FOR STATES, CITIES, AND INDUSTRIES

CHAPTER 15.

STATISTICS OF MANUFACTURES FOR STATES, CITIES, AND INDUSTRIES.

Introduction.—This chapter contains a summary of the statistics of manufactures for the United States for the calendar year 1909, as shown by the Thirteenth Census.

The principal facts derived from the census inquiry are presented in four general tables at the end of the chapter, the first giving statistics for individual industries, the second for states and territories, the third for each of the 25 leading manufacturing cities, and the fourth for each city of 10,000 or more inhabitants.

Table 110 gives for each industry in 1909, 1904, and 1899 the number of establishments; number of persons engaged in the industry during the year, classified as proprietors and firm members, salaried employees, and wage earners; primary power; capital; salaries; wages; cost of materials; value of products; value added by manufacture; and the percentage of increase in average number of wage earners and in value of products, from census to census. The industries are arranged alphabetically.

Table 111 gives similar statistics for the different states and territories, arranged geographically.

Table 112 gives for each of the 25 leading manufacturing cities the same items given in Tables 110 and 111; the cities are arranged according to the value of their manufactured products.

Table 113 gives, for each city of 10,000 or more inhabitants, the number of establishments, the average number of wage earners, the value of products, and the value added by manufacture for 1909, 1904, and 1899. The cities are arranged alphabetically by states.

In addition to these general tables there are interspersed in the text discussion a series of special text tables analyzing certain of the data contained in the general tables. Some of these special text tables present figures only for all industries combined in continental United States as a whole; others give statistics for the principal industries separately; and still others give figures for states and territories.

Scope of census: Factory industries.—Census statistics of manufactures are compiled primarily for the purpose of showing the absolute and relative magnitude of the different branches of industry covered and their growth or decline. Incidentally, the effort is made to present data throwing light upon character of organization, location of establishments, size of establishments, labor force, and similar subjects. When use is made of the data for these purposes it is imperative that due attention should be given

to the limitations of the figures. Particularly is this true when the attempt is made to derive from them figures purporting to show average wages, cost of production, or profits.

The census of 1909, like that of 1904, was confined to manufacturing establishments conducted under the factory system, as distinguished from the neighborhood, hand, and building industries. Where statistics for 1899 are given they have been reduced to a comparable basis by eliminating, as far as possible, the latter classes of industries. The census does not include establishments which were idle during the entire year, or had a value of products of less than \$500, or the manufacturing done in educational, eleemosynary, and penal institutions, or in governmental establishments, except those of the Federal Government.

Period covered.—The returns cover the calendar year 1909, or the business year which corresponds most nearly to that calendar year. The statistics cover a year's operations, except for establishments which began or discontinued business during the year.

The establishment.—As a rule, the term "establishment" represents a separated plant or mill. In some cases it represents two or more plants operated under a common ownership or for which one set of books of account is kept.

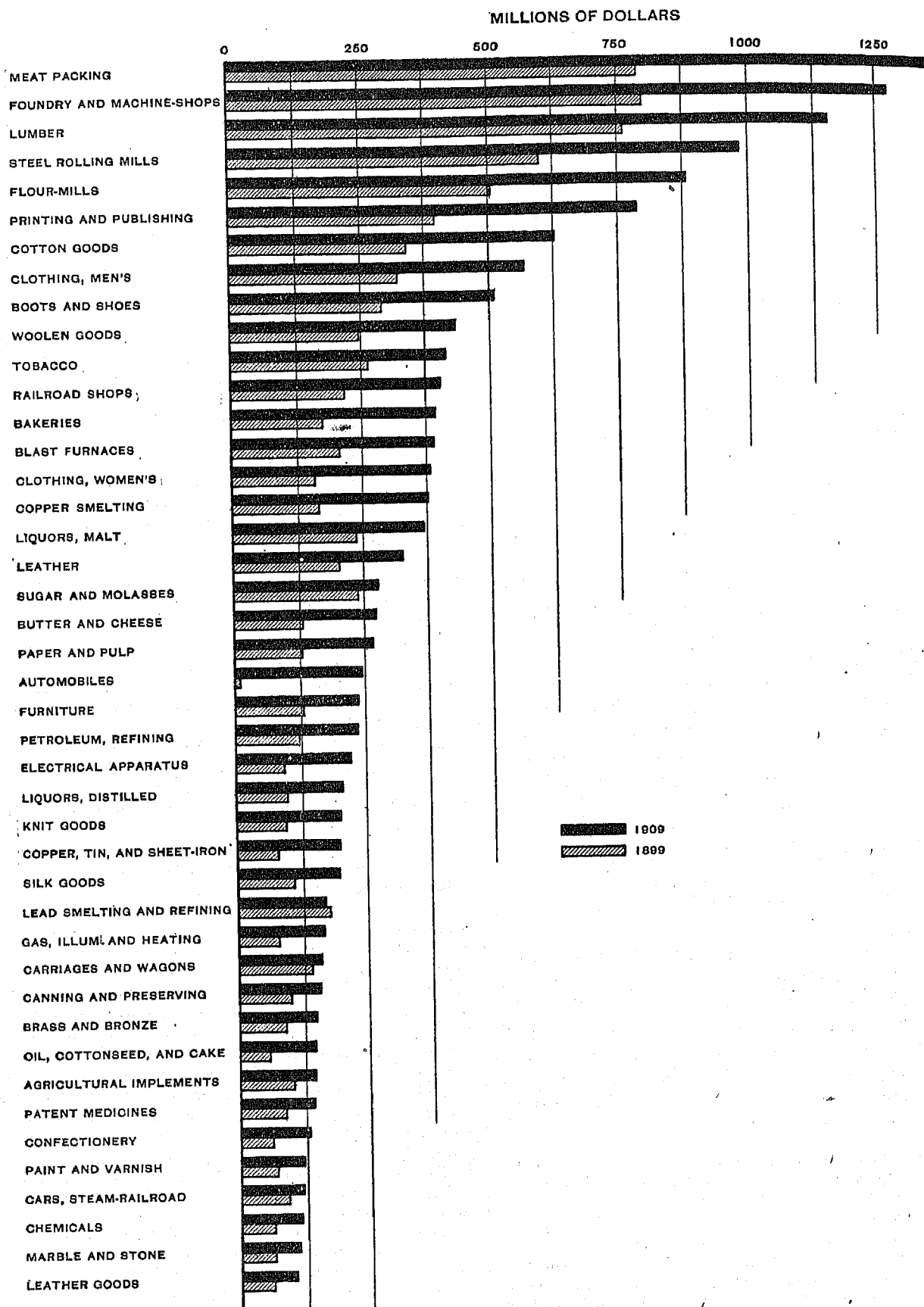
If the plants constituting an establishment as thus defined were not all located within the same city or state, separate reports were secured in order that the separate totals might be included in the statistics for each city or state. In some instances separate reports were secured for different industries carried on in the same establishment.

Classification by industries.—The establishments were assigned to the several classes of industries according to their products of chief value. The value of products reported for a given industry may thus, on the one hand, include minor products very different from those covered by the class designation, and, on the other hand, may not include the total product covered by this designation, because some part of this product may be made in establishments in which it is not the product of chief value.

The number of industries for which a separate presentation is made is 264, a much smaller number than in the reports for the census of 1904, in which 339 industries were shown separately. This decrease is due to the fact that an attempt to make a separate presentation would in the case of many industries be misleading, inasmuch as a large part of the product of the class described by the industry designation is made, not by establishments engaged primarily in manufacturing that class of commodities, but by establishments whose principal product is such as to necessitate their classification elsewhere. In order to avoid this difficulty it is necessary in many cases to combine a number of closely related industries under a more general designation. This condition is constantly becoming more conspicuous in the manufacturing business of the country, and consequently the number of industries which can properly be shown separately is smaller at this census than at previous censuses.

Owing to changes in industrial conditions, moreover, it is not always possible to classify establishments by industries in such a way as to permit accurate comparison with preceding censuses, and for some of the industries covered by Table 110, therefore, comparative statistics for earlier censuses are necessarily omitted.

VALUE OF PRODUCTS, BY INDUSTRIES: 1909 AND 1899.



GENERAL SUMMARY.

Continental United States and noncontiguous territories: 1909.—The following table gives for 1909 the more important figures for the manufactures of continental United States and for Alaska, Hawaii, and Porto Rico. The table does not cover possessions of the United States other than those mentioned. The statistics of manufactures included in the census of the Philippine Islands taken by the War Department for

1902 are not comparable with those shown in the reports for continental United States; and there has been no census of manufactures in Guam, Samoa, or the Canal Zone. The statistics for Alaska, Hawaii, and Porto Rico include some small establishments of the nature of hand or neighborhood industries, such as are omitted from the canvass for continental United States.

| Table 1 | NUMBER OR AMOUNT. | | | | |
|--|-------------------|----------------------------|--------------|--------------|--------------|
| | Total. | Continental United States. | Alaska. | Hawaii. | Porto Rico. |
| Number of establishments..... | 270,082 | 268,491 | 152 | 500 | 939 |
| Persons engaged in manufactures..... | 7,707,751 | 7,678,578 | 3,479 | 7,572 | 18,122 |
| Proprietors and firm members..... | 275,952 | 273,265 | 135 | 1,074 | 1,478 |
| Salaried employees..... | 792,168 | 790,267 | 245 | 594 | 1,062 |
| Wage earners (average number)..... | 6,639,931 | 6,615,046 | 3,099 | 5,904 | 15,582 |
| Primary horsepower..... | 18,755,286 | 18,675,376 | 3,975 | 41,930 | 34,005 |
| Capital..... | \$18,490,749,000 | \$18,428,270,000 | \$13,060,000 | \$23,875,000 | \$25,544,000 |
| Expenses..... | 18,526,436,000 | 18,454,090,000 | 9,454,000 | 31,753,000 | 31,139,000 |
| Services..... | 4,375,634,000 | 4,365,613,000 | 2,328,000 | 2,795,000 | 4,898,000 |
| Salaries..... | 940,900,000 | 938,575,000 | 380,000 | 686,000 | 1,259,000 |
| Wages..... | 3,434,734,000 | 3,427,038,000 | 1,948,000 | 2,109,000 | 3,639,000 |
| Materials..... | 12,195,019,000 | 12,142,791,000 | 5,120,000 | 25,629,000 | 21,479,000 |
| Miscellaneous..... | 1,955,783,000 | 1,945,686,000 | 2,006,000 | 3,329,000 | 4,762,000 |
| Value of products..... | 20,767,546,000 | 20,672,052,000 | 11,340,000 | 47,404,000 | 36,750,000 |
| Value added by manufacture (value of products less cost of materials)..... | 8,572,527,000 | 8,529,261,000 | 6,220,000 | 21,775,000 | 15,271,000 |

The total value of manufactures in the area covered by this table for 1909 was \$20,767,546,000, of which 99.5 per cent was contributed by continental United States, the manufactures of Alaska, Hawaii, and Porto Rico being comparatively unimportant. The most important industry in Alaska is the canning and preserving of fish; in Hawaii, the manufacture of sugar; and in Porto Rico, the manufacture of sugar and of tobacco products.

The above table is the only one in this report in which the statistics for the noncontiguous territories are included, all the other tables relating exclusively to continental United States.

Explanation of terms.—With reference to some of the items contained in the above and following tables certain explanations are necessary:

Persons engaged in manufacturing industries.—The statistics of the number of proprietors and firm members and the number of salaried employees are based on the returns for a single representative day only. In the case of wage earners a report was obtained of the number employed on the 15th of each month, and from these returns the average number employed during the year has been calculated by dividing the sum of the numbers reported for the several months by 12. (See also p. 452.)

Capital.—For reasons stated in reports of prior censuses the statistics of capital secured by the census canvass are so defective as to be of little value, except as indicating very general conditions. The instructions on the schedule for securing capital were as follows:

The answer should show the total amount of capital, both owned and borrowed, on the last day of the business year reported. All

the items of fixed and live capital may be taken at the amounts carried on the books. If land or buildings are rented, that fact should be stated and no value given. If a part of the land or buildings is owned, the remainder being rented, that fact should be so stated and only the value of the owned property given. Do not include securities and loans representing investments in other enterprises.

Materials.—The statistics as to cost of materials relate to the materials used during the year, which may be more or less than the materials purchased during the year. The term "materials" includes fuel, rent of power and heat, mill supplies, and containers, as well as materials forming a constituent part of the product. Under the head of "fuel" is included all fuel used, whether for heat, light, or power, or for the process of manufacture.

Expenses.—Under "Expenses" are included all items of expense incident to the year's business, except interest, whether on bonds or other forms of indebtedness, and allowances for depreciation.

Value of products.—The amounts given under this head represent the selling value at the factory of all products manufactured during the year, which may differ from the value of the products sold. Amounts received for work on materials furnished by others are included.

Cost of manufacture and profits.—Census data do not show the entire cost of manufacture, and consequently can not be used to show profits. No account has been taken of interest and depreciation. Even if the amount of profit could be determined by deducting the expenses from the value of the products the rate of profit on the investment could not properly be calculated, because of the very defective character of the returns regarding capital.

Primary horsepower.—This item represents the total primary power generated by the manufacturing establishments plus the amount of power, principally electric, rented by them from other concerns. It does not cover the electric power developed by the primary power of the establishments themselves, the inclusion of which would evidently result in duplication.

General comparison for the United States: 1909, 1904, and 1899.—The following table gives the principal items of information covered by census inquiries

relative to manufactures in continental United States for 1909, 1904, and 1899, together with the percentages of increase from census to census:

| Table 2 | NUMBER OR AMOUNT. | | | PER CENT OF INCREASE. | |
|--|-------------------|------------------|------------------|-----------------------|-----------|
| | 1909 | 1904 | 1899 | 1904-1909 | 1899-1904 |
| Number of establishments..... | 268,491 | 216,180 | 207,514 | 24.2 | 4.2 |
| Persons engaged in manufactures..... | 7,678,578 | 6,213,612 | (¹) | 23.6 | ..... |
| Proprietors and firm members..... | 273,265 | 225,673 | (¹) | 21.1 | ..... |
| Salaried employees..... | 790,267 | 519,556 | 364,120 | 52.1 | 42.7 |
| Wage earners (average number)..... | 6,615,046 | 5,468,383 | 4,712,763 | 21.0 | 16.0 |
| Primary horsepower..... | 18,675,376 | 13,487,707 | 10,097,893 | 38.5 | 33.6 |
| Capital..... | \$18,428,270,000 | \$12,675,581,000 | \$8,975,256,000 | 45.4 | 41.2 |
| Expenses..... | 18,454,090,000 | 13,138,260,000 | 9,870,425,000 | 40.5 | 33.1 |
| Services..... | 4,365,613,000 | 3,184,884,000 | 2,389,132,000 | 37.1 | 33.3 |
| Salaries..... | 938,575,000 | 574,439,000 | 380,771,000 | 63.4 | 50.9 |
| Wages..... | 3,427,038,000 | 2,610,445,000 | 2,008,361,000 | 31.3 | 30.0 |
| Materials..... | 12,142,791,000 | 8,500,208,000 | 6,575,851,000 | 42.9 | 29.3 |
| Miscellaneous..... | 1,945,686,000 | 1,453,168,000 | 905,442,000 | 33.9 | 60.5 |
| Value of products..... | 20,672,052,000 | 14,793,903,000 | 11,406,927,000 | 39.7 | 29.7 |
| Value added by manufacture (value of products less cost of materials)..... | 8,529,261,000 | 6,293,695,000 | 4,831,076,000 | 35.5 | 30.3 |

¹ Figures not available.

In 1909 the United States had 268,491 manufacturing establishments, which gave employment during the year to an average of 7,678,578 persons, of whom 6,615,046 were wage earners. These manufacturing establishments paid \$4,365,613,000 in salaries and wages, and turned out products to the value of \$20,672,052,000, to produce which materials costing \$12,142,791,000 were consumed. The value added by manufacture, namely, the difference between the cost of materials and the total value of products, was \$8,529,261,000. This figure best represents the net wealth created by manufacturing operations, because the gross value of products includes the cost of the materials used, which are either the products of non-manufacturing industries, such as agriculture, forestry, fisheries, and mining, or else are themselves the product of manufacturing establishments. The value of products derived from this latter class of materials involves a duplication, inasmuch as the value of these materials has already figured in the value of products reported for the establishments manufacturing them in the first instance; in some cases, indeed, where a given product has passed through several distinct stages of manufacture in different establishments before reaching its final form, this duplication may be repeated several times. All such duplications, as well as the original value of materials, are, however, eliminated in the figures for value added by manufacture. This value covers salaries and wages—which represent over one-half of the total—overhead charges, depreciation, interest, taxes, and other expenses attendant upon the manufacturing operations, as well as the profits of the undertaking.

Table 2 shows that the manufacturing industries of the United States as a whole experienced a more rapid growth during the five-year period 1904-1909

than during the period 1899-1904, although in both periods the progress was very marked. During the first five years of the decade the average number of wage earners increased 16 per cent; during the second five years, 21 per cent. The value of products increased 29.7 per cent during the first period and 39.7 per cent during the second period. The rate of increase in the value added by manufacture shows less difference between the two periods, being 30.3 per cent during the first five years and 35.5 per cent during the second five years. In this connection it may be noted that there was a greater rate of increase in the cost of materials during the second period than during the first.

During the 10 years from 1899 to 1909 the number of establishments increased 29.4 per cent; the capital employed, 105.3 per cent; the average number of wage earners, 40.4 per cent; the amount of primary power, 84.9 per cent; the value of materials consumed, 84.7 per cent; the value of products, 81.2 per cent; and the value added by manufacture, 76.6 per cent. The gross value of products in 1909 exceeded that in 1899 by more than \$9,000,000,000, and the value added by manufacture in 1909 was, in round numbers, \$3,700,000,000 more than in 1899.

It would be improper to infer that manufactures increased in volume during either of the five-year periods covered by the table to the full extent indicated by the increase in value of materials consumed or in the value of products, since the increase shown in these items is certainly due in part to the increase that has taken place in the price of commodities. It may be presumed that the quantity of products increased somewhat more rapidly than the number of wage earners; this might be expected from the fact that the amount of primary power increased much faster than the number of wage earners; in

other words, each wage earner, on the average, had greater assistance from mechanical power in 1909 than in 1904 or 1899.

It is a matter of interest to note that during both of the five-year periods the wages paid showed a higher percentage of increase than the average number of wage earners, thus indicating an increase in the average wages.

Comparison with earlier censuses.—In 1810 the Secretary of the Treasury made a report on the condition of manufactures in the United States and estimated that the value of products for 1809 exceeded \$120,000,000. An estimate based on the returns of the census of 1810 placed the value of the annual product at \$198,613,471. Further efforts to secure statistics of manufactures were made in 1820 and 1840, but the results were more or less unsatisfactory. In 1830 no such attempt was made. The census of 1850 was the first to present fairly complete statistics for manufactures. Each census from that time to 1890 was based in part on returns for the preceding calendar year and in part on returns for other 12-month periods, mainly ending during the census year itself. The last three censuses cover principally returns for the preceding calendar year or for 12-month periods ending within that year. In general, in this report the statistics for all censuses are referred to by the year preceding that in which the census was taken.

The statistics of manufactures secured at the decennial censuses from 1850 to 1900, inclusive, covered the neighborhood, hand, and building industries, as well as the factory industries, while the reports for 1904 and 1909 were confined to factory industries. The statistics for 1899 obtained at the decennial census of 1900, although originally taken on the broader basis, have, for the purpose of comparison with later censuses, been reduced to the factory basis by eliminating as far as possible the neighborhood, hand, and building trades, but no such elimination is possible with respect to the earlier censuses. For this reason the statistics for years prior to 1899 are not entirely comparable with those for 1904 and 1909. Nevertheless, for the purpose of showing in a rough way the movement during each decade since 1850, the following summary table is presented. Two sets of figures are given in this table for 1899, the one including the neighborhood, hand, and building trades, in order to make the data comparable with those for preceding censuses, and the other excluding them in order to make the figures comparable with those for later censuses. The values and wages for 1869 have been reduced to a gold basis, inasmuch as the figures as reported would, because of the inflation of the currency at that time, exaggerate the increase from 1859 to 1869, and understate the increase from 1869 to 1879.

| Table 3 | Number of establishments. | Capital. | Wage earners (average number). | Wages. | Cost of materials. | Value of products. | Value added by manufacture. |
|---|---------------------------|----------------|--------------------------------|---------------|--------------------|--------------------|-----------------------------|
| Factories and hand and neighborhood industries: | | | | | | | |
| 1849 (census of 1850)..... | 123,025 | \$533,245,000 | 957,059 | \$236,755,000 | \$555,124,000 | \$1,019,107,000 | \$463,983,000 |
| 1859 (census of 1860)..... | 140,433 | 1,009,856,000 | 1,311,246 | 378,879,000 | 1,031,606,000 | 1,885,862,000 | 854,257,000 |
| Per cent of increase, 1849 to 1859..... | 14.1 | 89.4 | 37.0 | 60.0 | 85.8 | 85.0 | 84.1 |
| 1869 (census of 1870) (gold value)..... | 252,148 | 1,694,567,000 | 2,053,996 | 620,467,000 | 1,990,742,000 | 3,385,860,000 | 1,395,118,000 |
| Per cent of increase, 1859 to 1869..... | 79.6 | 67.8 | 56.6 | 63.8 | 93.0 | 79.5 | 63.3 |
| 1879 (census of 1880)..... | 253,852 | 2,790,273,000 | 2,732,595 | 947,954,000 | 3,396,824,000 | 5,369,579,000 | 1,972,755,000 |
| Per cent of increase, 1869 to 1879..... | 0.7 | 64.7 | 33.0 | 52.8 | 90.6 | 74.5 | 41.4 |
| 1889 (census of 1890)..... | 355,405 | 6,525,051,000 | 4,251,535 | 1,891,210,000 | 5,162,014,000 | 9,372,379,000 | 4,210,365,000 |
| Per cent of increase, 1879 to 1889..... | 40.0 | 133.8 | 55.6 | 99.5 | 52.0 | 74.5 | 113.4 |
| 1899 (census of 1900)..... | 512,191 | 9,813,834,000 | 5,306,143 | 2,320,938,000 | 7,343,628,000 | 13,000,149,000 | 5,656,521,000 |
| Per cent of increase, 1889 to 1899..... | 44.1 | 50.4 | 24.8 | 22.7 | 42.3 | 38.7 | 34.3 |
| Factories, excluding hand and neighborhood industries: | | | | | | | |
| 1899 (census of 1900)..... | 207,514 | 8,975,250,000 | 4,712,763 | 2,008,361,000 | 6,575,851,000 | 11,406,927,000 | 4,831,076,000 |
| 1904 (census of 1905)..... | 216,180 | 12,675,581,000 | 5,468,383 | 2,610,445,000 | 8,500,208,000 | 14,793,903,000 | 6,293,695,000 |
| Per cent of increase, 1899 to 1904..... | 4.2 | 41.2 | 16.0 | 30.0 | 29.3 | 29.7 | 30.3 |
| 1909 (census of 1910)..... | 268,491 | 18,428,270,000 | 6,615,046 | 3,427,038,000 | 12,142,791,000 | 20,672,652,000 | 8,529,261,000 |
| Per cent of increase, 1904 to 1909..... | 24.2 | 45.4 | 21.0 | 31.3 | 42.9 | 39.7 | 35.5 |
| Per cent of increase, 1899 to 1909..... | 29.4 | 105.3 | 40.4 | 70.6 | 84.7 | 81.2 | 76.6 |

This table shows that, although the returns for 1849 included neighborhood, hand, and building trades and those for 1909 did not, nevertheless the value of products in the latter year was over twenty times as great as the value reported 60 years before. During the same time the number of wage earners employed increased almost sixfold.

As judged by the number of wage earners, the decade showing the greatest percentage of increase was that from 1859 to 1869, during which the average number of wage earners increased 56.6 per cent. The decade 1879

to 1889 also showed an exceptionally high percentage of increase in this respect, while the next largest percentage of increase occurred during the decade from 1899 to 1909. As respects value of products, the percentage of increase during the past decade exceeds that in any other except the decade from 1849 to 1859; but in value added by manufacture, the percentage of increase during the past 10 years falls below that from 1879 to 1889, as well as that from 1849 to 1859.

The absolute increases shown for the various items covered by the table during the decade 1899 to 1909

were much greater than during any other decade; the increase in value of products, in fact, almost equaled the total value of all manufactured products in 1889.

Leading industries.—The relative importance of the leading manufacturing industries in the United States in 1909 and their growth from 1899 to 1909 are shown in Table 4, which includes the industries having a gross value of products in 1909 of \$100,000,000 or more. This table presents for each industry the most important items for 1909 and also the percentages of increase in these items for the two five-year periods. The industries are arranged in the order of the value of products. The table also shows the rank of the industries, not only with respect to value of products, but with respect to number of wage earners employed and value added by manufacture, and the percentage of the total of each of these items for all industries combined which is represented by each specified industry. The number of wage earners and the value added by manufacture are, on the whole, a better measure of the relative importance of manufacturing industries than the gross value of products. In some industries the value of the materials used constitutes by far the larger part of the total value of products, the manufacturing process involving the addition of only a small amount of labor cost and other expenses and of manufacturer's profit to the cost of the materials. Moreover, in some of the industries there is a much greater duplication in the gross value of products than in others, such duplication being due to the use of the product of one establishment in the industry as material for another establishment. This duplication, of course, does not appear in the value added by manufacture.

In considering the ranking of the industries in Table 4, it should be borne in mind that some of the industries specified are in a sense groups of industries rather than single industries. As stated in the Introduction, in certain cases, in order to avoid a misleading understatement of the importance of the production of a given minor class of commodities, the returns for establishments making these commodities as their sole or principal product have had to be combined with those of establishments in larger industries which produce primarily other commodities, but which incidentally make a large part of the distinctive products in question. In a few instances where a similar condition exists, however, it was deemed best not to make such a combination of industries. As also stated in the Introduction, the report for each establishment, as a whole, has been assigned to a given class of industry according to its products of chief value, so that the figures for any given class must not be taken either as fully covering or as representing exclusively the operations of that branch of manufacturing indicated by the industry designation.

The following explanations show the scope of those classifications in the table which are not on their face entirely clear:

Slaughtering and meat packing.—This classification includes the wholesale slaughtering and meat-packing establishments and those engaged in the manufacture of sausage, but not the numerous retail butcher shops which in the aggregate slaughter a large number of animals. It includes the manufacture of many by-products, some of which are carried to a high degree of elaboration.

Foundry and machine-shop products.—This industry includes all allied industries excepting those which manufacture a distinctive product indicated by some other classification, such as cash registers, calculating machines, sewing machines, and electrical machinery. The establishments engaged in the manufacture of bells, gas machines and gas and water meters, hardware, plumbers' supplies, saddlery hardware, steam fittings, structural ironwork, and cast-iron and cast-steel pipe, some of which were reported under separate classifications at previous censuses, are all included under this general heading.

Lumber and timber products.—This industry embraces logging operations, ordinary sawmills, planing mills, and establishments engaged in the manufacture of wooden packing boxes. It does not include statistics of mills engaged exclusively in custom sawing for local consumption.

Iron and steel, steel works and rolling mills.—This industry embraces the manufacture of steel and the hot rolling of iron and steel. It also includes the making of forgings and castings and the manufacture of rolled iron and steel into more highly finished forms when conducted as a part of the rolling-mill operations, as well as the few extant forges and bloomeries. It does not, however, include the making of cold-rolled products, nor of forgings, castings, and manufactures of iron and steel by establishments not equipped with steel-making furnaces or hot trains of rolls.

Flour-mill and gristmill products.—This classification includes statistics for all mills grinding wheat, rye, or buckwheat flour, or corn meal, hominy, grits, or feed, but it does not include statistics for mills doing custom grinding exclusively, or for factories making fancy cereal food or other special food preparations as a chief product.

Printing and publishing.—This classification includes job-printing establishments, the printing and publishing of books, newspapers and periodicals, and music, bookbinding, steel engraving, and lithographing.

Cotton goods, including cotton small wares.—In addition to the statistics for cotton mills proper, there are included under this head the statistics for establishments that make a specialty of small wares, such as

braids, tapes, bindings, corset and shoe laces, and the like.

Clothing, men's, including shirts.—This classification includes the making of men's and boys' ready-made clothing; the making of overalls, butchers' aprons, bathing suits, and gymnasium clothing; and the manufacture of all kinds of shirts—cotton, linen, flannel, etc.—as well as shirt bosoms and shirt waists for men and boys.

Boots and shoes, including cut stock and findings.—Under this head are included not only factories making the finished product, but those doing the whole or part of the work on materials furnished by others, as well as shops doing stitching, crimping, fitting, and bottoming, or performing other special operations. The manufacture of footwear not coming strictly under the head of boots and shoes, such as overgaiters, moccasins, and leggings, is also covered by this designation. It does not include the manufacture of rubber boots and shoes.

Clothing, women's.—Besides the making of suits, dresses, skirts, and shirt waists, this industry includes the manufacture of women's underwear and night robes, of infants' clothing, and of such articles as aprons, linings, belts, dress shields, and hose supporters.

Sugar and molasses, not including beet sugar.—Under this classification are included the manufacture of sugar and of some by-products of the sugar industry, such as molasses and sirup, and also the operations of sugar refineries, together with the manufacture of maple sugar. It does not, however, include the small plantation or custom sugar mills.

Furniture and refrigerators.—This industry embraces the manufacture of wood and metal furniture of all kinds, store and office fixtures, and refrigerators and ice boxes, except where such products are provided for by a distinct classification, such as show cases.

Copper, tin, and sheet-iron products.—This classification comprises the manufacture of all sheet-metal products of copper, tin, and iron, including the preparation of copper, tin, or sheet-iron material for building construction. It includes the factory work on cornices, skylights, roofing, etc., but does not include the erection or installation of the same.

Canning and preserving.—This industry includes the canning and preserving of fruits and vegetables, fish, oysters, clams, etc., and the manufacture of pickles, preserves, jellies, sauces, etc. It includes the preparation of pickled, smoked, and dried fish, and the packing of dried fruits by packing houses which make a specialty of such business, but does not include the drying and packing of fruits by the grower on the farm, nor does it include the canning of meats, soups, and similar products in meat-packing establishments, the statistics for which are included with those for the slaughtering and meat-packing industry.

Patent medicines and compounds and druggists' preparations.—Under this head are included establishments making so-called patent medicines, and also some compounds that are not used for medicinal purposes, and the manufacture of capsules, extracts, tinctures, and other pharmaceutical preparations, together with perfumery and cosmetics.

Chemicals.—This classification includes establishments engaged primarily in the manufacture of acids, sodas, potashes, alums, coal-tar products, cyanides, bleaching materials, plastics, compressed or liquefied gases, alkaloids, gold, silver, and platinum salts, chloroform, ether, and other fine chemicals, glycerin, epsom salts, copperas, blue vitriol, and other bases and salts, when they are made as a chief product by the establishment reporting. Chemical substances produced by the aid of electricity are presented in a group by themselves. Chemicals of the class above specified are frequently manufactured as by-products by establishments classified in the census reports under a different head, for example, by establishments making patent medicines and compounds and druggists' preparations, soap, fertilizers, baking powders, and flavoring extracts; by refiners of coal tar for use as roofing material; by smelters and refiners of lead and zinc; and by establishments engaged in the manufacture of sulphuric, nitric, and mixed acids and of explosives, in wood distillation, and in making tin and terne plate.

It will be seen from Table 4 that some of the industries that hold a very high rank in gross value of products rank comparatively low in the number of wage earners employed and in the value added by manufacture. Where this is the case it indicates that the cost of materials represents a large proportion of the total value of products, and that therefore the value added by manufacture, of which wages constitute usually the largest item, is not commensurate with the total value of products. Thus the slaughtering and meat-packing industry, which ranks first in gross value of products, and the flour-mill and gristmill industry, which ranks fifth in that respect, both hold a comparatively low rank with regard to number of wage earners and value added by manufacture. The blast-furnace industry, the smelting and refining of copper, the manufacture and refining of sugar and molasses, the manufacture of butter, cheese, and condensed milk, the refining of petroleum, and the smelting and refining of lead are other industries which rank much higher in gross value of products than in the number of wage earners or the value added by manufacture.

There are several industries the rank of which according to the number of wage earners and the value added by manufacture is decidedly higher than the rank according to value of products; in other words, the cost of materials is relatively a smaller part of the total value of products for these industries than for

most others. Among the industries of this class are the making of women's clothing, the manufacture of automobiles, furniture, electrical machinery, apparatus, and supplies, hosiery and knit goods, silk goods, and agricultural implements, and the confectionery and marble and stone work industries.

The foundry and machine-shop industry, the lumber industry, the steel works and rolling mills, the printing and publishing industry, the manufacture of cotton goods, of men's clothing, and of boots and shoes all rank among the first 10 industries of the country on

each of the three bases shown in the table. The figures for both value of products and value added by manufacture in the case of the brewery and distillery industries include a very large amount of tax paid to the Federal Government, and are therefore misleading as an indication of the relative importance of these industries from a purely manufacturing standpoint. That importance is best shown by their ranking in number of wage earners; in this respect the brewery industry ranks twenty-fifth among the industries of the country, and the distillery industry forty-third.

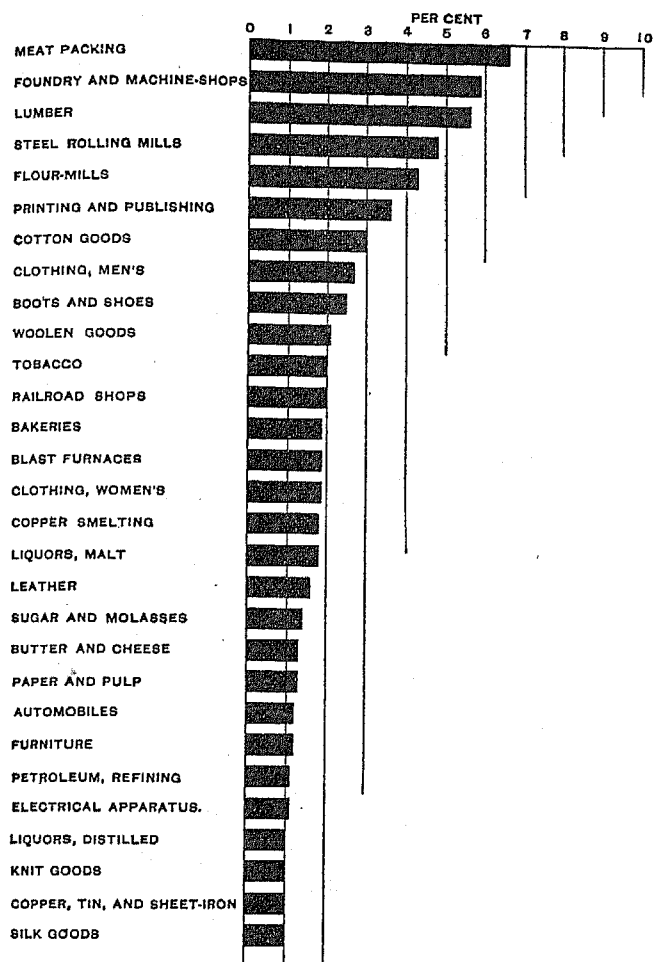
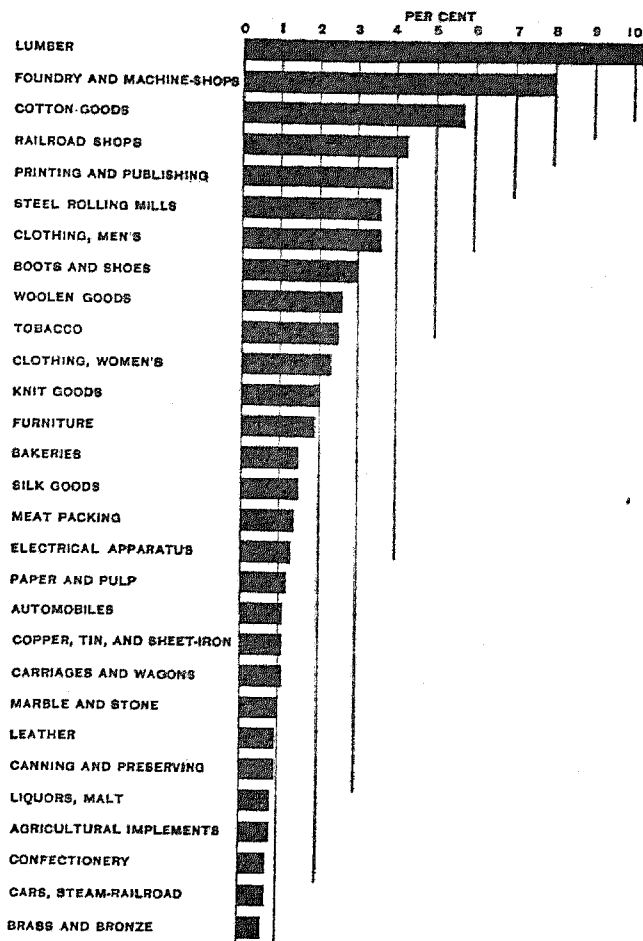
Table 4

| INDUSTRY. | Number of establishments. | WAGE EARNERS. | | | VALUE OF PRODUCTS. | | | VALUE ADDED BY MANUFACTURE. | | | PER CENT OF INCREASE. ¹ | | | | | |
|---|---------------------------|-----------------|-------|------------------------|----------------------------------|-------|------------------------|----------------------------------|-------|------------------------|------------------------------------|-----------|--------------------|-----------|-----------------------------|-----------|
| | | Average number. | Rank. | Per cent distribution. | Amount (expressed in thousands). | Rank. | Per cent distribution. | Amount (expressed in thousands). | Rank. | Per cent distribution. | Wage earners (average number). | | Value of products. | | Value added by manufacture. | |
| | | | | | | | | | | | 1904-1909 | 1899-1904 | 1904-1909 | 1899-1904 | 1904-1909 | 1899-1904 |
| All industries..... | 268,491 | 6,615,046 | .... | 100.0 | \$20,672,052 | .... | 100.0 | \$8,520,261 | .... | 100.0 | 21.0 | 16.0 | 39.7 | 29.7 | 35.5 | 30.3 |
| Slaughtering and meat packing..... | 1,641 | 89,728 | 16 | 1.4 | 1,370,568 | 1 | 6.6 | 167,740 | 13 | 2.0 | 19.0 | 8.9 | 48.6 | 17.0 | 51.6 | 7.3 |
| Foundry and machine-shop products..... | 13,253 | 531,011 | 2 | 8.0 | 1,228,475 | 2 | 5.9 | 688,464 | 1 | 8.1 | 19.8 | 3.8 | 39.5 | 10.3 | 34.2 | 17.8 |
| Lumber and timber products..... | 40,671 | 695,019 | 1 | 10.5 | 1,156,129 | 3 | 5.6 | 648,011 | 2 | 7.6 | 30.5 | 4.7 | 30.7 | 16.2 | 23.7 | 32.3 |
| Iron and steel, steel works and rolling mills..... | 446 | 240,076 | 6 | 3.6 | 985,723 | 4 | 4.8 | 328,222 | 4 | 3.9 | 15.7 | 13.3 | 46.3 | 12.9 | 41.0 | 12.8 |
| Flour-mill and gristmill products..... | 11,691 | 39,453 | 30 | 0.6 | 883,584 | 5 | 4.3 | 116,008 | 18 | 1.4 | 0.9 | 21.4 | 23.0 | 42.2 | 24.7 | 27.0 |
| Printing and publishing..... | 31,445 | 258,434 | 5 | 3.9 | 737,876 | 6 | 3.6 | 536,101 | 3 | 6.3 | 18.0 | 12.2 | 33.6 | 39.8 | 30.8 | 40.6 |
| Cotton goods, including cotton small wares..... | 1,324 | 378,880 | 3 | 5.7 | 628,392 | 7 | 3.0 | 257,383 | 7 | 3.0 | 10.9 | 4.3 | 39.5 | 32.8 | 56.7 | 1.0 |
| Clothing, men's, including shirts..... | 6,354 | 239,696 | 7 | 3.6 | 568,077 | 8 | 2.7 | 270,562 | 6 | 3.2 | 38.0 | 10.2 | 39.7 | 25.6 | 38.5 | 25.5 |
| Boots and shoes, including cut stock and findings..... | 1,918 | 198,297 | 8 | 3.0 | 512,798 | 9 | 2.5 | 180,060 | 10 | 2.1 | 23.7 | 6.0 | 43.4 | 23.3 | 36.0 | 34.3 |
| Woolen, worsted, and felt goods, and wool hats..... | 985 | 168,722 | 9 | 2.6 | 435,979 | 10 | 2.1 | 153,101 | 15 | 1.8 | 15.0 | 12.3 | 36.5 | 28.4 | 33.4 | 20.9 |
| Tobacco manufactures..... | 15,822 | 166,810 | 10 | 2.5 | 416,695 | 11 | 2.0 | 239,509 | 8 | 2.8 | 4.6 | 20.3 | 25.8 | 25.6 | 16.8 | 20.0 |
| Cars and general shop construction and repairs by steam-railroad companies..... | 1,145 | 282,174 | 4 | 4.3 | 405,601 | 12 | 2.0 | 206,188 | 9 | 2.4 | 19.1 | 36.4 | 30.9 | 42.0 | 29.9 | 46.0 |
| Bread and other bakery products..... | 23,026 | 100,216 | 14 | 1.5 | 396,855 | 13 | 1.9 | 158,831 | 14 | 1.9 | 23.3 | 35.0 | 47.2 | 53.7 | 39.8 | 41.4 |
| Iron and steel, blast furnaces..... | 208 | 38,429 | 31 | 0.6 | 391,429 | 14 | 1.9 | 70,791 | 30 | 0.8 | 9.6 | 10.6 | 68.8 | 12.1 | 33.9 | 29.7 |
| Clothing, women's..... | 4,558 | 153,743 | 11 | 2.3 | 384,752 | 15 | 1.9 | 175,964 | 11 | 2.1 | 32.9 | 38.2 | 55.4 | 55.4 | 50.5 | 56.7 |
| Smelting and refining, copper..... | 38 | 15,628 | 38 | 0.2 | 378,806 | 16 | 1.8 | 45,274 | 36 | 0.5 | 22.6 | 12.6 | 57.3 | 45.8 | 2.8 | 2.5 |
| Liquors, malt..... | 1,414 | 54,579 | 25 | 0.8 | 374,730 | 17 | 1.8 | 278,134 | 5 | 3.3 | 13.4 | 22.0 | 25.6 | 25.9 | 24.5 | 20.6 |
| Leather, tanned, curried, and finished..... | 919 | 62,202 | 23 | 0.9 | 327,874 | 18 | 1.6 | 79,595 | 27 | 0.9 | 8.7 | 0.8 | 29.8 | 23.8 | 29.5 | 25.3 |
| Sugar and molasses, not including beet sugar..... | 233 | 13,526 | 41 | 0.2 | 279,249 | 19 | 1.4 | 31,606 | 41 | 0.4 | -0.2 | -4.1 | 0.7 | 15.7 | -2.7 | 77.5 |
| Butter, cheese, and condensed milk..... | 8,479 | 18,481 | 30 | 0.3 | 274,568 | 20 | 1.3 | 39,012 | 39 | 0.5 | 18.5 | 21.5 | 63.2 | 28.6 | 54.4 | 15.1 |
| Paper and wood pulp..... | 777 | 75,978 | 17 | 1.2 | 267,657 | 21 | 1.3 | 102,215 | 21 | 1.2 | 15.2 | 32.9 | 41.8 | 48.2 | 32.0 | 36.4 |
| Automobiles, including bodies and parts..... | 743 | 75,721 | 19 | 1.1 | 249,202 | 22 | 1.2 | 117,556 | 17 | 1.4 | 528.4 | 437.7 | 720.7 | 532.0 | 596.3 | 473.5 |
| Furniture and refrigerators..... | 3,155 | 128,452 | 13 | 1.9 | 239,887 | 23 | 1.2 | 131,112 | 16 | 1.5 | 12.5 | 26.0 | 34.0 | 36.1 | 29.0 | 37.3 |
| Petroleum, refining..... | 147 | 13,920 | 40 | 0.2 | 236,998 | 24 | 1.1 | 37,725 | 40 | 0.4 | -16.9 | 37.4 | 35.4 | 41.2 | 5.9 | 69.0 |
| Electrical machinery, apparatus, and supplies..... | 1,009 | 87,256 | 18 | 1.3 | 221,309 | 25 | 1.1 | 112,743 | 20 | 1.3 | 44.3 | 43.9 | 57.2 | 52.3 | 52.4 | 72.1 |
| Liquors, distilled..... | 613 | 6,480 | 43 | 0.1 | 204,699 | 26 | 1.0 | 108,722 | 12 | 2.0 | 20.1 | 44.0 | 55.9 | 35.6 | 59.7 | 29.4 |
| Hosiery and knit goods..... | 1,374 | 129,275 | 12 | 2.0 | 200,144 | 27 | 1.0 | 89,903 | 23 | 1.1 | 24.2 | 24.4 | 46.0 | 40.0 | 49.1 | 35.1 |
| Copper, tin, and sheet-iron products..... | 4,228 | 73,615 | 20 | 1.1 | 199,824 | 28 | 1.0 | 87,242 | 25 | 1.0 | 38.8 | 38.4 | 66.6 | 53.1 | 55.8 | 56.6 |
| Silk and silk goods, including throwsters..... | 852 | 99,037 | 15 | 1.5 | 196,912 | 29 | 1.0 | 89,145 | 24 | 1.0 | 24.4 | 21.7 | 47.7 | 24.3 | 55.2 | 28.0 |
| Smelting and refining, lead..... | 28 | 7,424 | 42 | 0.1 | 167,406 | 30 | 0.8 | 15,443 | 43 | 0.2 | -2.0 | -9.0 | -9.9 | 5.9 | -8.5 | -46.1 |
| Gas, illuminating and heating..... | 1,296 | 37,215 | 32 | 0.6 | 166,814 | 31 | 0.8 | 114,380 | 19 | 1.3 | 21.8 | 36.1 | 33.3 | 65.3 | 30.0 | 59.6 |
| Carriages and wagons and materials..... | 5,492 | 69,928 | 21 | 1.1 | 159,893 | 32 | 0.8 | 77,942 | 28 | 0.9 | -10.2 | 5.5 | 2.6 | 12.7 | -0.5 | 9.6 |
| Canning and preserving..... | 3,767 | 59,968 | 24 | 0.9 | 157,101 | 33 | 0.8 | 55,278 | 31 | 0.7 | 5.3 | -0.1 | 20.4 | 31.3 | 16.8 | 22.7 |
| Brass and bronze products..... | 1,021 | 40,618 | 29 | 0.6 | 149,989 | 34 | 0.7 | 50,761 | 34 | 0.6 | 22.5 | 22.1 | 46.5 | 15.5 | 38.1 | 33.8 |
| Oil, cottonseed, and cake..... | 817 | 17,071 | 37 | 0.3 | 147,868 | 35 | 0.7 | 28,035 | 42 | 0.3 | 0.0 | 41.2 | 53.4 | 64.2 | 71.2 | 20.8 |
| Agricultural implements..... | 640 | 50,551 | 26 | 0.8 | 146,320 | 36 | 0.7 | 86,022 | 26 | 1.0 | 6.7 | 1.7 | 30.6 | 10.7 | 35.0 | 11.3 |
| Patent medicines and compounds and druggists' preparations..... | 3,642 | 22,895 | 35 | 0.3 | 141,942 | 37 | 0.7 | 91,566 | 22 | 1.1 | 11.8 | 7.6 | 20.9 | 32.3 | 17.5 | 37.1 |
| Confectionery..... | 1,944 | 44,638 | 27 | 0.7 | 134,706 | 38 | 0.7 | 53,645 | 32 | 0.6 | 23.2 | 34.9 | 54.8 | 43.6 | 40.1 | 51.4 |
| Paint and varnish..... | 791 | 14,240 | 39 | 0.2 | 124,889 | 39 | 0.6 | 45,873 | 35 | 0.5 | 22.4 | 20.0 | 37.5 | 30.6 | 47.9 | 24.9 |
| Cars, steam-railroad, not including operations of railroad companies..... | 110 | 43,086 | 28 | 0.7 | 123,730 | 40 | 0.6 | 44,977 | 37 | 0.5 | 26.5 | 1.8 | 11.3 | 22.8 | 26.6 | 23.5 |
| Chemicals..... | 349 | 23,714 | 34 | 0.4 | 117,689 | 41 | 0.6 | 53,567 | 33 | 0.6 | 19.7 | 4.1 | 56.5 | 20.1 | 61.5 | 18.0 |
| Marble and stone work..... | 4,964 | 65,603 | 22 | 1.0 | 113,093 | 42 | 0.5 | 75,696 | 29 | 0.9 | 28.4 | 22.6 | 33.3 | 33.3 | 29.9 | 38.4 |
| Leather goods..... | 2,375 | 34,907 | 33 | 0.5 | 104,719 | 43 | 0.5 | 44,692 | 38 | 0.5 | 2.1 | 10.8 | 27.5 | 35.9 | 18.6 | 38.5 |
| All other industries..... | 61,887 | 1,048,441 | .... | 24.9 | 4,561,002 | .... | 22.0 | 2,084,399 | .... | 24.4 | 18.5 | 23.9 | 41.8 | 41.5 | 36.6 | 47.1 |

¹ Per cent of increase is based on figures in Table 110. A minus sign (—) denotes decrease.

The table shows very great differences among the several industries with respect to the percentages of increase in the number of wage earners, value of products, and value added by manufacture. The great majority of the industries, however, show an

increase in each of these items for each of the five-year periods, the exceptions being the sugar industry and the smelting and refining of lead, which show a decrease in one or more items for each five-year period; the refining of petroleum, which shows a

PER CENT DISTRIBUTION OF VALUE OF PRODUCTS,
BY INDUSTRIES: 1909.PER CENT DISTRIBUTION OF AVERAGE NUMBER OF
WAGE EARNERS, BY INDUSTRIES: 1909.

decrease in one item, and the manufacture of carriages and wagons, which shows a decrease in two items, for the period 1904 to 1909; and the blast-furnace industry and the canning and preserving industry, which show a decrease in one item each during the period 1899 to 1904.

By far the highest percentages of increase are shown for the automobile industry, the gross value of products of which increased more than sevenfold during the five years 1904 to 1909, and more than fiftyfold during the decade as a whole. Other industries which show exceptionally large increases for both five-year periods in all three items are the making of men's and of women's clothing, the bakery and the butter, cheese, and condensed-milk industries, the manufacture of electrical machinery, apparatus, and supplies, and of copper, tin, and sheet-iron products, the distillery industry, the manufacture of hosiery and knit goods and of silk and silk goods, the illuminating-gas industry, the manufacture of brass and bronze products, and the confectionery, paint and varnish, and marble and stone work industries. It is interesting to note that the group of "all other industries," which in-

cludes the less important industries of the country, shows greater percentages of increase than all industries combined, thus indicating possibly an increased tendency toward diversification in manufacturing industries.

The percentage of increase in all three of the items—number of wage earners, gross value of products, and value added by manufacture—was greater during the second five-year period (1904 to 1909) than during the first (1899 to 1904) in the slaughtering and meat-packing and foundry and machine-shop industries, the manufacture of cotton goods, the men's clothing, boot and shoe, and woollen-goods industries, the smelting and refining of copper, the manufacture of automobiles, silk and silk goods, brass and bronze products, agricultural implements, and paint and varnish, the steel works and rolling mills, and the chemical industry. On the other hand, the percentage of increase in all three items was less during the later five-year period than during the earlier in the flour-mill and gristmill, railroad repair shop, bakery, women's clothing, paper and wood pulp, petroleum refining, furniture, illuminating gas, carriage and wagon, and leather-goods industries.

In all the other industries covered by the table the increases during the second period are in some items greater than during the first period, while in other items they are less, or else the industry shows a decrease during one or both periods.

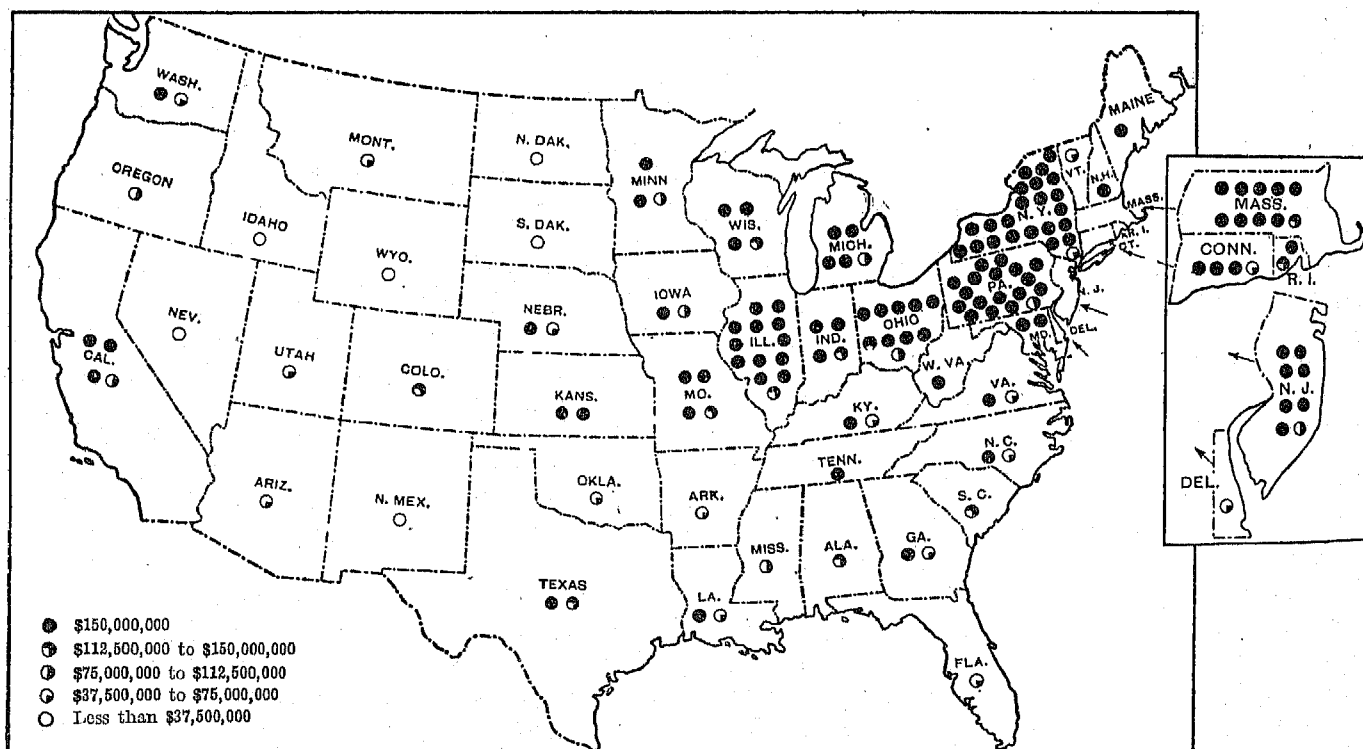
In considering the relative importance of the industries shown in Table 110 and not included in Table 4, it should be noted that there are several industries listed the figures given for which fall far short of being a complete presentation of the statistics for that branch of manufactures covered by the industry designation, for the reason that they cover only establishments engaged primarily in manufacturing the class of products indicated by this designation, while large quantities of the same products are manufactured incidentally by establishments classified under other heads. Some conspicuous examples are the manufacture of glue, candles, lard, and fertilizers, and the dyeing and finishing of textiles. A large proportion of the glue, lard, and fertilizers are manufactured by slaughtering and meat-packing establishments, and quantities of fertilizers are also made in cottonseed-oil mills. The dyeing and finishing of textiles is done largely in the establishments that manufacture the fabric. Candles are manufactured in establishments classified under the head of "soap" and in those engaged in the manufacture of petroleum products. For reasons of this character the roasting and grinding of coffee and spice, and the manufacture of fertilizers, food preparations, and rubber goods, and the soap industry, for each of which products valued at over \$100,000,000 were reported, are not shown in Table 4.

Summary by states and geographic divisions.—Table 5 on the next page shows, for each state, the population, also the number of wage earners, value of products, and value added by manufacture in 1909, together with the rank of the state with respect to each of these items and the percentage of the total reported from each state. It also shows the percentage of increase with respect to each of these three items from 1904 to 1909 and from 1899 to 1904, respectively. The states are arranged in the order of their rank with respect to value of products.

The first seven states in respect to value of products are also the first seven in respect to number of wage earners and value added by manufacture. Each of these seven states has the same rank in all three respects except that Illinois, which is third in value of products and value added by manufacture, ranks fourth in number of wage earners, Massachusetts advancing to third place. These seven states together reported over three-fifths of the total value of manufactured products for the United States.

Most of the other states show approximately the same rank in each of the three items, but there are several states in which, because of the large proportion which the cost of materials represents of the total value of products, the rank according to value of products is materially higher than that in number of wage earners or in value added by manufacture. This is particularly true of states in which the flour-mill and slaughtering industries are the most important. The most noteworthy case of this character is Kansas, which ranks four-

VALUE OF PRODUCTS OF MANUFACTURES: 1909.



MANUFACTURES

teenth in value of products, but only thirty-third in number of wage earners and twenty-eighth in value added by manufacture.

With only one exception all of the states show an increase in each of the three items from 1904 to 1909; in Montana, however, the value added by manufacture shows a decrease for this period, due largely to merely technical differences in methods of accounting in the smelting industry, which is the principal one in that state. A few of the states showed a decrease in one or more items for the period 1899 to 1904.

The greatest percentages of increase are naturally in those states in which the development of manufacturing industries is comparatively recent. Thus Texas, Washington, Oregon, Utah, Oklahoma, Idaho, North Dakota, and Nevada show exceptionally high rates of increase for both five-year periods. Among the 10 states which are most important in manufacturing the most conspicuous advances are in Ohio, New Jersey, and Michigan. The absolute increase, as distinguished from the percentage of increase, was greater in New York, the leading manufacturing state, than in any other state.

Table 5

| Table 5 | STATE. | Population. | Number of establishments. | WAGE EARNERS. | | VALUE OF PRODUCTS. | | VALUE ADDED BY MANUFACTURE. | | PER CENT OF INCREASE. ¹ | | | | | | | | |
|---------|---------------------------|-------------|---------------------------|-----------------|-------|------------------------|----------------------------------|-----------------------------|------------------------|------------------------------------|-------|------------------------|--------------------------------|-----------|--------------------|-----------|-----------------------------|-----------|
| | | | | Average number. | Rank. | Per cent distribution. | Amount (expressed in thousands). | Rank. | Per cent distribution. | Amount (expressed in thousands). | Rank. | Per cent distribution. | Wage earners (average number). | | Value of products. | | Value added by manufacture. | |
| | | | | | | | | | | | | | 1904-1909 | 1899-1904 | 1904-1909 | 1899-1904 | 1904-1909 | 1899-1904 |
| | United States..... | 91,972,266 | 268,491 | 6,815,046 | .... | 100.0 | \$20,672,052 | .... | 100.0 | \$8,529,261 | .... | 100.0 | 21.0 | 18.0 | 29.7 | 29.7 | 35.5 | 30.3 |
| | New York..... | 9,113,614 | 44,935 | 1,003,981 | 1 | 15.2 | 3,369,490 | 1 | 16.3 | 1,512,586 | 1 | 17.7 | 17.2 | 17.9 | 35.4 | 32.9 | 32.7 | 33.5 |
| | Pennsylvania..... | 7,665,111 | 27,503 | 877,543 | 2 | 13.3 | 2,626,742 | 2 | 12.7 | 1,044,182 | 2 | 12.2 | 15.0 | 15.0 | 34.3 | 18.5 | 28.5 | 17.5 |
| | Illinois..... | 5,638,591 | 18,026 | 465,764 | 4 | 7.0 | 1,919,277 | 3 | 9.3 | 758,350 | 3 | 8.9 | 22.8 | 14.0 | 36.1 | 25.8 | 33.0 | 29.8 |
| | Massachusetts..... | 3,366,416 | 11,684 | 584,559 | 3 | 8.8 | 1,490,529 | 4 | 7.2 | 659,764 | 4 | 7.7 | 19.7 | 11.4 | 32.6 | 23.8 | 32.6 | 21.7 |
| | Ohio..... | 4,707,121 | 15,138 | 446,934 | 5 | 6.8 | 1,437,936 | 5 | 7.0 | 613,734 | 5 | 7.2 | 22.7 | 18.2 | 49.7 | 28.3 | 41.7 | 27.6 |
| | New Jersey..... | 2,587,167 | 8,817 | 326,223 | 6 | 4.9 | 1,145,529 | 6 | 5.5 | 425,496 | 6 | 5.0 | 22.5 | 24.5 | 47.9 | 40.0 | 40.0 | 39.2 |
| | Michigan..... | 2,810,173 | 9,159 | 231,499 | 7 | 3.5 | 685,109 | 7 | 3.3 | 316,497 | 7 | 3.7 | 32.1 | 12.5 | 59.7 | 34.2 | 59.0 | 36.5 |
| | Wisconsin..... | 2,333,800 | 9,721 | 182,553 | 10 | 2.8 | 590,306 | 8 | 2.9 | 243,949 | 9 | 2.9 | 20.6 | 10.1 | 43.6 | 25.8 | 32.7 | 30.4 |
| | Indiana..... | 2,700,876 | 7,969 | 186,984 | 9 | 2.8 | 579,075 | 9 | 2.8 | 244,700 | 8 | 2.9 | 21.3 | 10.9 | 47.0 | 16.0 | 41.1 | 22.2 |
| | Missouri..... | 3,293,335 | 8,375 | 152,993 | 11 | 2.3 | 574,111 | 10 | 2.8 | 219,700 | 11 | 2.6 | 14.9 | 23.6 | 30.5 | 30.0 | 17.3 | 41.3 |
| | California..... | 2,377,549 | 7,659 | 115,296 | 13 | 1.7 | 529,761 | 11 | 2.6 | 204,523 | 12 | 2.4 | 14.9 | 30.6 | 44.3 | 42.7 | 35.0 | 63.8 |
| | Connecticut..... | 1,114,760 | 4,251 | 210,792 | 8 | 3.2 | 490,272 | 12 | 2.4 | 233,013 | 10 | 2.7 | 16.1 | 13.7 | 32.8 | 17.1 | 31.1 | 22.2 |
| | Minnesota..... | 2,075,708 | 5,501 | 84,767 | 18 | 1.3 | 409,420 | 13 | 2.0 | 127,798 | 13 | 1.5 | 21.7 | 7.9 | 33.6 | 37.6 | 31.3 | 32.6 |
| | Kansas..... | 1,690,949 | 3,435 | 44,215 | 33 | 0.7 | 325,104 | 14 | 1.6 | 66,230 | 23 | 0.8 | 24.3 | 31.2 | 64.0 | 58.7 | 58.7 | 25.4 |
| | Maryland..... | 1,295,346 | 4,837 | 107,921 | 15 | 1.6 | 315,669 | 15 | 1.5 | 116,620 | 15 | 1.4 | 14.6 | (*) | 29.7 | 15.3 | 24.9 | 14.2 |
| | Rhode Island..... | 542,610 | 1,951 | 113,538 | 14 | 1.7 | 280,344 | 16 | 1.4 | 122,152 | 14 | 1.4 | 16.7 | 10.3 | 38.7 | 22.1 | 36.9 | 15.0 |
| | Texas..... | 3,896,542 | 4,588 | 70,230 | 25 | 1.1 | 272,996 | 17 | 1.3 | 94,717 | 19 | 1.1 | 24.1 | 27.1 | 62.0 | 60.7 | 53.0 | 53.0 |
| | Iowa..... | 2,224,771 | 5,528 | 61,635 | 29 | 0.9 | 259,238 | 18 | 1.2 | 88,531 | 22 | 1.0 | 43.6 | 11.4 | 61.4 | 20.8 | 53.4 | 22.6 |
| | Louisiana..... | 1,656,388 | 2,516 | 76,165 | 21 | 1.2 | 223,949 | 19 | 1.1 | 89,084 | 21 | 1.0 | 36.4 | 36.6 | 20.2 | 67.3 | 28.5 | 92.7 |
| | Kentucky..... | 2,289,905 | 4,776 | 65,400 | 27 | 1.0 | 223,754 | 20 | 1.1 | 111,975 | 16 | 1.3 | 9.4 | 15.6 | 40.1 | 26.3 | 52.0 | 23.3 |
| | Washington..... | 1,141,990 | 3,674 | 69,120 | 26 | 1.0 | 220,746 | 21 | 1.1 | 102,858 | 17 | 1.2 | 52.9 | 43.4 | 71.4 | 81.9 | 64.2 | 92.5 |
| | Virginia..... | 2,061,612 | 5,085 | 105,676 | 16 | 1.6 | 219,704 | 22 | 1.1 | 94,211 | 20 | 1.1 | 31.6 | 21.2 | 47.7 | 37.0 | 44.5 | 23.2 |
| | North Carolina..... | 2,206,287 | 4,931 | 121,473 | 12 | 1.8 | 216,656 | 23 | 1.0 | 94,794 | 18 | 1.1 | 42.3 | 18.0 | 52.0 | 67.1 | 49.9 | 56.5 |
| | Georgia..... | 2,009,121 | 4,792 | 104,588 | 17 | 1.6 | 202,863 | 24 | 1.0 | 85,893 | 23 | 1.0 | 12.8 | 11.3 | 34.3 | 59.8 | 27.4 | 49.2 |
| | Nebraska..... | 1,192,214 | 2,500 | 24,336 | 37 | 0.4 | 199,019 | 25 | 1.0 | 47,938 | 31 | 0.6 | 20.1 | 8.5 | 28.5 | 18.9 | 55.3 | -16.2 |
| | Tennessee..... | 2,184,789 | 4,609 | 73,840 | 22 | 1.1 | 180,217 | 26 | 0.9 | 76,201 | 25 | 0.9 | 21.9 | 31.8 | 30.6 | 48.7 | 30.0 | 53.5 |
| | Maine..... | 742,371 | 3,546 | 79,955 | 19 | 1.2 | 176,029 | 27 | 0.8 | 78,928 | 24 | 0.9 | 6.7 | 7.2 | 22.2 | 27.5 | 26.4 | 23.6 |
| | New Hampshire..... | 430,572 | 1,961 | 78,653 | 20 | 1.2 | 164,581 | 28 | 0.8 | 66,424 | 27 | 0.8 | 20.3 | -3.4 | 33.1 | 14.9 | 31.5 | 6.3 |
| | West Virginia..... | 1,221,119 | 2,586 | 63,893 | 28 | 1.0 | 161,950 | 29 | 0.8 | 69,072 | 26 | 0.8 | 46.0 | 32.3 | 63.5 | 47.8 | 54.8 | 49.8 |
| | Alabama..... | 2,138,093 | 3,398 | 72,148 | 24 | 1.1 | 145,962 | 30 | 0.7 | 62,519 | 29 | 0.7 | 16.0 | 18.0 | 33.7 | 51.4 | 28.3 | 42.8 |
| | Colorado..... | 799,024 | 2,034 | 28,067 | 36 | 0.4 | 130,044 | 31 | 0.6 | 49,553 | 30 | 0.6 | 28.7 | 11.9 | 29.9 | 12.4 | 33.8 | 30.8 |
| | South Carolina..... | 1,515,400 | 1,854 | 73,046 | 23 | 1.1 | 113,236 | 32 | 0.5 | 46,885 | 32 | 0.6 | 22.9 | 26.4 | 42.7 | 48.8 | 59.4 | 28.7 |
| | Oregon..... | 672,765 | 2,246 | 28,750 | 35 | 0.4 | 93,005 | 33 | 0.4 | 42,453 | 35 | 0.5 | 55.2 | 28.1 | 67.5 | 51.7 | 74.3 | 57.7 |
| | Mississippi..... | 1,797,114 | 2,598 | 50,384 | 31 | 0.8 | 80,555 | 34 | 0.4 | 43,629 | 34 | 0.5 | 30.2 | 44.4 | 40.2 | 70.4 | 37.8 | 84.3 |
| | Arkansas..... | 1,574,449 | 2,925 | 44,962 | 32 | 0.7 | 74,916 | 35 | 0.4 | 39,981 | 36 | 0.5 | 35.9 | 5.0 | 39.1 | 33.0 | 24.7 | 48.8 |
| | Montana..... | 376,053 | 677 | 11,655 | 41 | 0.2 | 73,272 | 36 | 0.4 | 24,092 | 38 | 0.3 | 30.1 | -9.1 | 10.3 | 25.9 | -5.5 | 12.4 |
| | Florida..... | 752,619 | 2,159 | 57,473 | 30 | 0.9 | 72,890 | 37 | 0.4 | 46,762 | 33 | 0.6 | 36.5 | 18.7 | 44.9 | 47.1 | 38.5 | 58.3 |
| | Vermont..... | 355,956 | 1,958 | 33,788 | 34 | 0.5 | 68,310 | 38 | 0.3 | 33,487 | 37 | 0.4 | 2.1 | 17.5 | 8.3 | 22.5 | 9.2 | 22.0 |
| | Utah..... | 373,351 | 749 | 11,785 | 40 | 0.2 | 61,989 | 39 | 0.3 | 20,723 | 40 | 0.2 | 46.4 | 48.8 | 59.2 | 116.5 | 48.2 | 113.8 |
| | Oklahoma..... | 1,657,155 | 2,310 | 13,143 | 39 | 0.2 | 53,682 | 40 | 0.3 | 19,529 | 41 | 0.2 | 140.9 | 129.1 | 119.5 | 200.7 | 142.1 | 198.3 |
| | Delaware..... | 202,322 | 726 | 21,238 | 38 | 0.3 | 52,840 | 41 | 0.3 | 21,902 | 39 | 0.3 | 15.0 | -10.2 | 28.4 | -0.4 | 34.6 | -1.4 |
| | Arizona..... | 204,354 | 311 | 6,441 | 44 | 0.1 | 50,257 | 42 | 0.2 | 16,657 | 42 | 0.2 | 24.4 | 53.3 | 79.0 | 37.4 | 23.5 | 7.4 |
| | District of Columbia..... | 331,069 | 513 | 7,707 | 43 | 0.1 | 25,289 | 43 | 0.1 | 15,042 | 43 | 0.2 | 22.4 | 2.3 | 37.7 | 11.8 | 41.5 | 18.1 |
| | Idaho..... | 325,594 | 725 | 8,220 | 42 | 0.1 | 22,400 | 44 | 0.1 | 12,480 | 44 | 0.1 | 168.5 | 97.2 | 155.4 | 192.2 | 165.5 | 200.0 |
| | North Dakota..... | 577,056 | 752 | 2,789 | 48 | (*) | 19,138 | 45 | 0.1 | 5,464 | 46 | 0.1 | 58.9 | 29.2 | 87.3 | 63.2 | 75.9 | 48.1 |
| | South Dakota..... | 583,888 | 1,020 | 3,602 | 46 | 0.1 | 17,870 | 46 | 0.1 | 6,394 | 45 | 0.1 | 44.5 | 12.0 | 36.6 | 37.3 | 45.7 | 44.1 |
| | Nevada..... | 81,875 | 177 | 2,257 | 49 | (*) | 11,887 | 47 | 0.1 | 3,521 | 49 | (*) | 181.4 | 59.1 | 283.9 | 145.5 | 139.8 | 145.5 |
| | New Mexico..... | 327,301 | 313 | 4,143 | 45 | 0.1 | 7,898 | 48 | (*) | 4,637 | 47 | 0.1 | 19.1 | 39.7 | 38.4 | 40.5 | 38.4 | 68.2 |
| | Wyoming..... | 145,965 | 268 | 2,867 | 47 | (*) | 6,249 | 49 | (*) | 3,641 | 48 | (*) | 56.3 | -11.0 | 77.4 | 7.8 | 63.9 | 17.7 |

¹ Per cent of increase is based on figures in Table 111. A minus sign (-) denotes decrease.

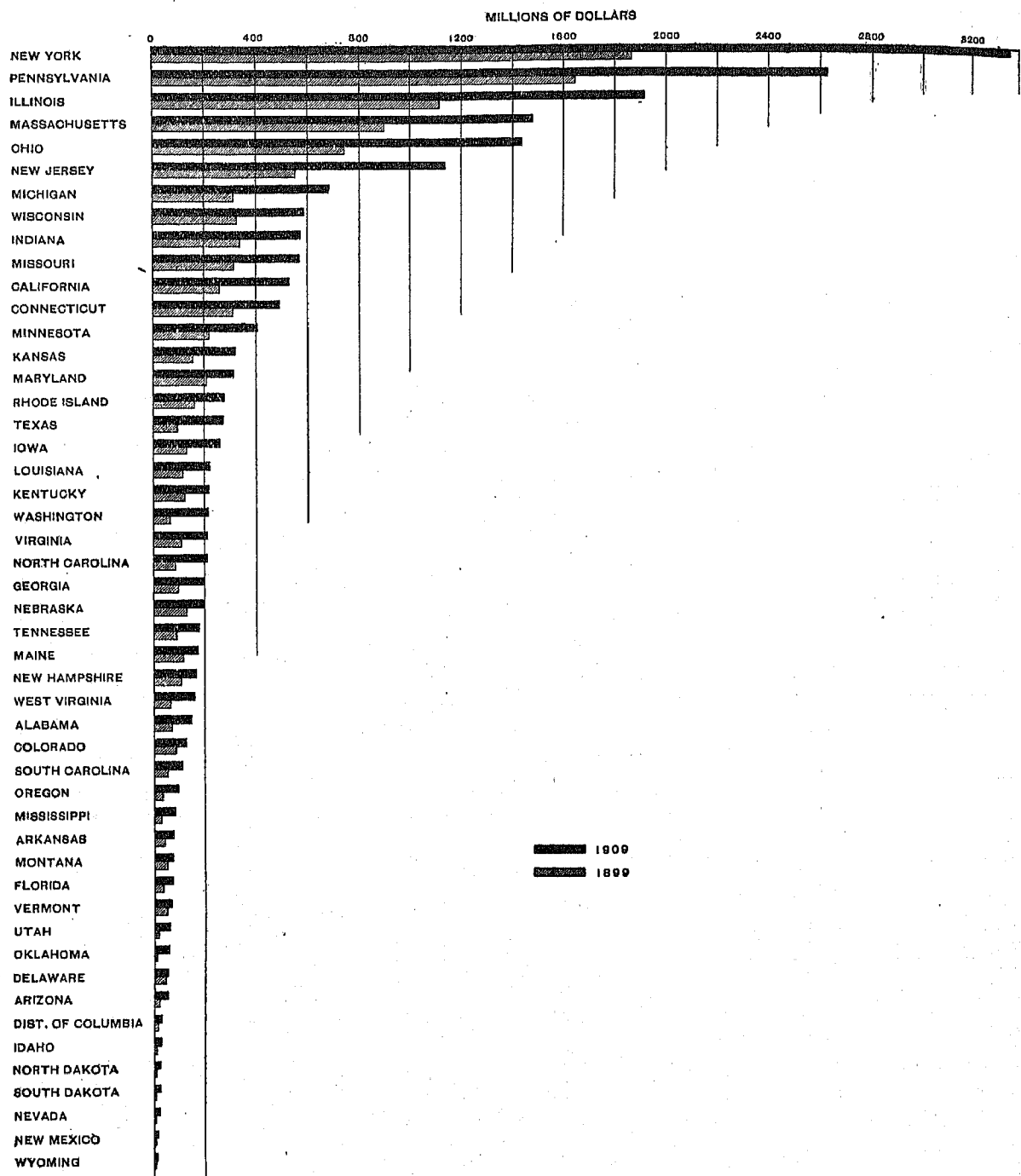
* Less than one-tenth of 1 per cent.

Table 6, on page 448, presents similar data for the nine grand geographic divisions of the United States, arranged in the order of their rank in value of products. The states included in each division are shown in Table 111.

The three Middle Atlantic states—New York, New Jersey, and Pennsylvania—together reported more than one-third of the total value of manufactured products

for the country; the East North Central states, about one-fourth; and the New England states, somewhat over one-eighth. These three divisions together contributed 72.6 per cent of the total value of manufactured products in 1909; they showed, however, somewhat lower percentages of increase during the past decade than the other divisions, in which manufacturing is of more recent development.

VALUE OF PRODUCTS OF MANUFACTURES, BY STATES: 1909 AND 1899.



AVERAGE NUMBER OF WAGE EARNERS, BY STATES: 1909 AND 1899.

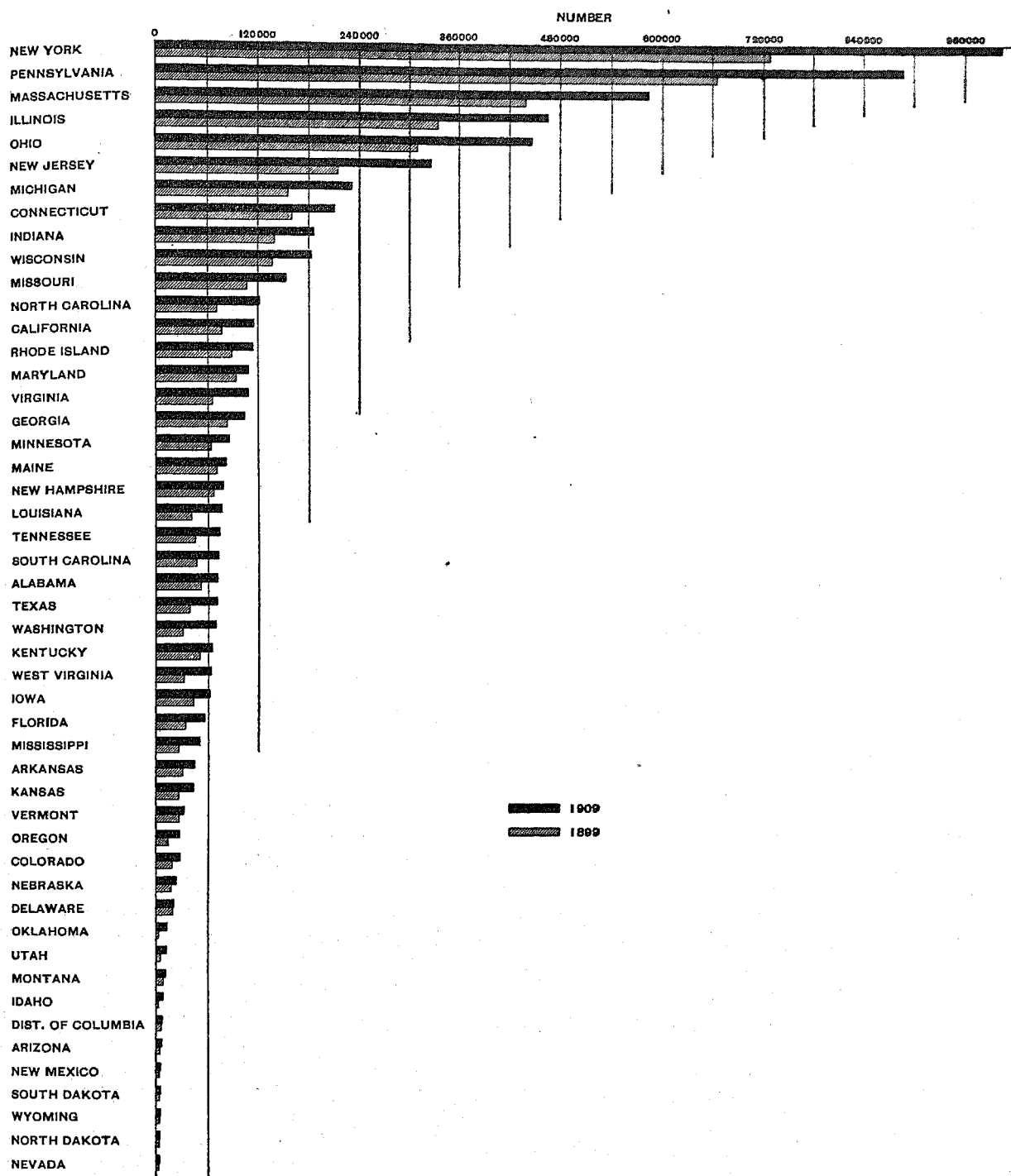


Table 6

| DIVISION. | Popula- tion. | Number of estab- lish- ments. | WAGE EARNERS. | | VALUE OF PRODUCTS. | | VALUE ADDED BY MANUFACTURE. | | PER CENT OF INCREASE. | | | | | |
|-------------------------|------------------|--|--------------------|--|--|-------|--|-------|--------------------------------------|---------------|-----------------------|---------------|-------------------------------------|---------------|
| | | | Average number. | Per cent dis- tribu- tion. | Amount (ex- pressed in thou- sands). | Rank. | Amount (ex- pressed in thou- sands). | Rank. | Wage earners (average number). | | Value of products. | | Value added by manu- facture. | |
| | | | | | | | | | 1904- 1909 | 1899- 1904 | 1904- 1909 | 1899- 1904 | 1904- 1909 | 1899- 1904 |
| United States | 91,972,266 | 268,481 | 6,615,046 | 100.0 | \$20,672,052 | 100.0 | \$8,529,261 | 100.0 | 21.0 | 16.0 | 39.7 | 29.7 | 35.5 | 30.3 |
| Middle Atlantic..... | 19,315,892 | 81,315 | 2,207,747 | 33.4 | 7,141,701 | 34.5 | 2,982,203 | 35.0 | 17.0 | 17.6 | 36.9 | 28.1 | 32.2 | 28.0 |
| East North Central..... | 18,250,621 | 60,043 | 1,513,764 | 22.9 | 5,211,702 | 25.2 | 2,177,230 | 25.5 | 23.6 | 14.1 | 44.6 | 26.4 | 39.6 | 29.4 |
| New England..... | 6,552,681 | 25,351 | 1,101,290 | 16.6 | 2,070,065 | 12.9 | 1,193,708 | 14.0 | 17.1 | 10.4 | 31.8 | 22.0 | 31.2 | 20.3 |
| West North Central..... | 11,637,921 | 27,171 | 374,337 | 5.7 | 1,803,899 | 8.7 | 562,044 | 6.6 | 19.8 | 17.4 | 40.4 | 32.0 | 33.0 | 23.8 |
| South Atlantic..... | 12,194,895 | 28,088 | 663,015 | 10.0 | 1,381,186 | 6.7 | 591,181 | 6.9 | 26.9 | 14.0 | 41.8 | 36.8 | 39.5 | 34.1 |
| Pacific..... | 4,192,304 | 13,570 | 213,166 | 3.2 | 843,512 | 4.1 | 340,834 | 4.1 | 29.9 | 33.2 | 52.9 | 51.2 | 46.3 | 69.7 |
| East South Central..... | 8,409,901 | 15,381 | 261,772 | 4.0 | 630,488 | 3.0 | 294,325 | 3.4 | 18.3 | 24.8 | 35.8 | 42.8 | 38.7 | 42.8 |
| West South Central..... | 8,784,534 | 12,339 | 204,520 | 3.1 | 625,443 | 3.0 | 243,312 | 2.9 | 42.6 | 26.5 | 50.6 | 64.6 | 44.5 | 70.4 |
| Mountain..... | 2,633,517 | 5,254 | 75,435 | 1.1 | 363,996 | 1.8 | 135,304 | 1.6 | 42.9 | 18.6 | 42.9 | 32.8 | 32.8 | 33.6 |

Summary for 50 leading cities: 1909.—Table 7 presents, for the 50 cities which stand highest in value of manufactured products, arranged in order of rank, data similar to those presented for the geographic divisions in Table 6. It should be particularly noted in considering this table that the figures relate only to the manufacturing establishments situated actually within the boundaries of the several cities.

In the case of practically every city listed there are important manufacturing establishments in the immediate vicinity, and in the case of several of the cities such outside establishments, which virtually constitute a part of the city's industrial interests, have a greater value of products than those within the city itself. The most notable instances of this character are Pittsburgh and Boston, which would rank decidedly higher in a table based on metropolitan or industrial districts than they do in the table for cities proper. While the population of Pittsburgh proper is 533,905, the population of the metropolitan district of Pittsburgh, as defined by the Census Bureau, is 1,042,855. Similarly, the population of the Boston metropolitan district is 1,520,470, as compared with 670,585 for the city proper. Further details regarding the manufactures of the 25 leading cities are given in Table 112.

The rank of the cities of the country with respect to manufactures is in many cases decidedly different from their rank in population. Thus Boston ranks fifth in population, but eighth in value of manufactured products; Baltimore, seventh in population, but thirteenth in value of manufactured products; and Los Angeles, sixteenth in population, but thirty-second in value of products. Kansas City, Kans., on the other hand, by reason of the large slaughtering establishments there, ranks fifteenth in value of manufactured products, but is not among the 50 principal cities from the standpoint of population. Of the 50 cities in the United States which have over 100,000 inhabitants, 14 are not included among the 50 cities having the largest value of manufactures.

In the case of some of the cities listed in the table, the rank with respect to the number of wage earners and the value added by manufacture is very different from that with respect to the gross value of products, these differences being dependent upon the character of the predominating industries. It is noteworthy, however, that the 13 cities which rank highest in gross value of products are also the 13 which occupy the highest rank with respect to wage earners and value added by manufacture, although considered individually these cities do not in all cases hold the same rank in each of the three respects. Conspicuous instances of cities having higher rank in gross value of products than in number of wage earners or value added by manufacture are Kansas City, Kans., South Omaha, Youngstown, Bayonne, and Perth Amboy. On the other hand, cities which lead in the manufacture of textiles, such as Lawrence, Fall River, Lowell, New Bedford, and Paterson, have a decidedly higher rank with respect to number of wage earners than with respect to either value of products or value added by manufacture.

For every city listed in the table a greater gross value of products and, with the exception of Omaha, a greater value added by manufacture were reported in 1909 than in 1899. Only two cities—San Francisco and New Orleans—showed a loss in gross value in 1909 as compared with 1904, and only San Francisco a loss in value added by manufacture. Between 1899 and 1904, however, decreases in gross value of manufactures occurred in four cities. In number of wage earners, Pittsburgh, San Francisco, South Omaha, and Peoria showed a decline in 1909 as compared with 1899; several other cities showed decreases from 1899 to 1904, but these were more than made up during the second half of the decade. It may be noted that the statistics for the Pittsburgh industrial district, which is more comprehensive than the city, would show decided gains and that the decrease in the manufacturing industries in San Francisco is the natural result of the great earthquake and fire.

Of the cities reporting products of \$200,000,000 or more, Detroit showed the greatest percentage

of increase in all of the items under consideration and Cleveland the next greatest, with the exception of the number of wage earners, in which it was exceeded by Milwaukee. Among the smaller manufacturing cities included in the table, those showing conspicuous

increases are Akron, Perth Amboy, Los Angeles, and Seattle.

In the case of most of the cities higher rates of increase in all three items are shown for the period 1904 to 1909 than for the period 1899 to 1904.

Table 7

| CITY. | Population. | Number of establishments. | WAGE EARNERS. | | VALUE OF PRODUCTS. | | VALUE ADDED BY MANUFACTURE. | | PER CENT OF INCREASE. ¹ | | | | | |
|---------------------|-------------|---------------------------|-----------------|-------|----------------------------------|-------|----------------------------------|-------|------------------------------------|-----------|--------------------|-----------|-----------------------------|-----------|
| | | | Average number. | Rank. | Amount (expressed in thousands). | Rank. | Amount (expressed in thousands). | Rank. | Wage earners (average number). | | Value of products. | | Value added by manufacture. | |
| | | | | | | | | | 1904-1909 | 1899-1904 | 1904-1909 | 1899-1904 | 1904-1909 | 1899-1904 |
| New York, N. Y. | 4,766,883 | 25,938 | 554,002 | 1 | \$2,029,693 | 1 | \$937,538 | 1 | 12.2 | 12.6 | 33.0 | 30.2 | 32.3 | 31.5 |
| Chicago, Ill. | 2,185,283 | 9,656 | 293,977 | 2 | 1,281,171 | 2 | 487,701 | 2 | 21.5 | 9.4 | 34.1 | 19.7 | 33.6 | 25.5 |
| Philadelphia, Pa. | 1,549,008 | 8,379 | 251,884 | 3 | 746,076 | 3 | 316,984 | 3 | 10.0 | 6.6 | 26.2 | 13.7 | 22.8 | 14.8 |
| St. Louis, Mo. | 687,029 | 2,667 | 87,371 | 4 | 328,495 | 4 | 140,306 | 4 | 5.6 | 27.6 | 22.9 | 28.0 | 8.3 | 41.0 |
| Cleveland, Ohio. | 560,663 | 2,148 | 84,728 | 5 | 271,961 | 5 | 117,048 | 6 | 32.3 | 15.7 | 58.2 | 23.4 | 57.4 | 18.2 |
| Detroit, Mich. | 465,766 | 2,036 | 81,011 | 6 | 252,992 | 6 | 122,774 | 5 | 67.1 | 26.3 | 97.3 | 45.1 | 99.1 | 49.1 |
| Pittsburgh, Pa. | 533,905 | 1,659 | 67,474 | 9 | 243,454 | 7 | 94,927 | 8 | -5.8 | -0.2 | 15.2 | -3.2 | 9.5 | -3.4 |
| Boston, Mass. | 670,535 | 3,155 | 69,637 | 8 | 237,457 | 8 | 112,880 | 7 | 17.7 | 11.9 | 28.8 | 13.3 | 25.8 | 11.5 |
| Buffalo, N. Y. | 428,715 | 1,753 | 51,412 | 13 | 218,804 | 9 | 82,266 | 12 | 18.6 | 27.1 | 48.5 | 39.5 | 39.4 | 48.7 |
| Milwaukee, Wis. | 373,857 | 1,704 | 59,502 | 12 | 208,324 | 10 | 87,703 | 10 | 37.2 | 5.2 | 51.0 | 24.5 | 31.1 | 39.8 |
| Newark, N. J. | 347,469 | 1,858 | 59,955 | 11 | 202,511 | 11 | 87,832 | 11 | 18.3 | 18.2 | 35.0 | 33.1 | 26.6 | 32.5 |
| Cincinnati, Ohio. | 303,591 | 2,184 | 60,192 | 10 | 194,516 | 12 | 92,584 | 9 | 2.7 | 6.6 | 17.1 | 17.2 | 11.8 | 17.8 |
| Baltimore, Md. | 558,485 | 2,502 | 71,444 | 7 | 186,978 | 13 | 79,954 | 13 | 9.8 | -2.3 | 24.5 | 11.1 | 14.9 | 16.2 |
| Minneapolis, Minn. | 301,408 | 1,102 | 26,962 | 25 | 165,405 | 14 | 45,412 | 18 | 24.4 | 10.5 | 36.5 | 28.3 | 49.7 | 26.6 |
| Kansas City, Kans. | 82,331 | 166 | 12,294 | 42 | 164,081 | 15 | 19,691 | 44 | 16.8 | 11.0 | 70.1 | 20.6 | 56.4 | 12.9 |
| San Francisco, Cal. | 418,912 | 1,796 | 28,244 | 21 | 133,041 | 16 | 56,824 | 15 | -26.5 | 18.0 | -3.4 | 28.7 | -3.1 | 49.1 |
| Jersey City, N. J. | 267,779 | 745 | 25,454 | 28 | 128,775 | 17 | 39,458 | 21 | 25.1 | 17.0 | 70.0 | 3.9 | 45.5 | 18.9 |
| Indianapolis, Ind. | 233,650 | 855 | 31,815 | 19 | 126,522 | 18 | 42,371 | 20 | 19.0 | 27.4 | 53.9 | 38.6 | 38.1 | 44.8 |
| Providence, R. I. | 224,326 | 1,080 | 46,881 | 14 | 120,241 | 19 | 55,471 | 16 | 16.5 | 3.7 | 39.7 | 16.9 | 32.0 | 16.3 |
| Rochester, N. Y. | 218,149 | 1,203 | 39,108 | 15 | 112,676 | 20 | 62,002 | 14 | 23.1 | 13.3 | 38.9 | 25.9 | 43.6 | 37.4 |
| Louisville, Ky. | 223,928 | 903 | 27,023 | 24 | 101,284 | 21 | 47,156 | 17 | 8.2 | 8.3 | 21.7 | 25.9 | 25.7 | 20.1 |
| South Omaha, Nebr. | 26,259 | 71 | 6,306 | 48 | 14,763 | 48 | 11.4 | 48 | -10.5 | 37.1 | -3.0 | 79.6 | -3.2 | -3.2 |
| Youngstown, Ohio. | 79,066 | 115 | 10,498 | 45 | 81,271 | 23 | 18,979 | 45 | 29.7 | -6.7 | 73.5 | 38.2 | 62.6 | 8.3 |
| Lawrence, Mass. | 85,892 | 162 | 30,542 | 20 | 24,555 | 24 | 39.4 | 23 | 39.4 | 4.8 | 66.5 | 15.1 | 85.6 | 10.2 |
| New Orleans, La. | 339,076 | 848 | 17,186 | 37 | 78,794 | 25 | 30,062 | 28 | -1.6 | 7.9 | -3.2 | 41.7 | 32.1 | 32.4 |
| Worcester, Mass. | 145,986 | 580 | 28,221 | 22 | 77,148 | 26 | 34,547 | 25 | 23.8 | 0.9 | 47.9 | 11.4 | 37.5 | 7.8 |
| Bayonne, N. J. | 55,545 | 97 | 7,519 | 47 | 73,041 | 27 | 14,709 | 49 | 6.5 | 51.1 | 21.5 | 57.1 | 7.8 | 184.0 |
| Akron, Ohio. | 60,067 | 246 | 15,831 | 39 | 73,158 | 28 | 30,087 | 27 | 64.5 | 16.0 | 118.0 | 52.4 | 128.8 | 41.4 |
| Perth Amboy, N. J. | 32,121 | 80 | 6,896 | 50 | 73,093 | 29 | 9,161 | 50 | 48.5 | 97.0 | 110.9 | 147.5 | 104.3 | 65.2 |
| Lynn, Mass. | 89,336 | 431 | 27,868 | 23 | 71,503 | 30 | 30,142 | 26 | 27.1 | 31.5 | 30.0 | 38.8 | 34.6 | 50.5 |
| Paterson, N. J. | 125,600 | 702 | 32,004 | 18 | 69,584 | 31 | 34,856 | 22 | 12.3 | -0.1 | 27.3 | 12.7 | 28.0 | 16.1 |
| Los Angeles, Cal. | 319,198 | 1,325 | 17,327 | 36 | 68,586 | 32 | 29,673 | 29 | 66.2 | 101.5 | 97.0 | 190.0 | 84.0 | 128.9 |
| Bridgeport, Conn. | 102,054 | 367 | 25,775 | 27 | 65,009 | 33 | 27,062 | 32 | 32.2 | 14.4 | 47.2 | 32.9 | 24.3 | 36.9 |
| Fall River, Mass. | 119,295 | 288 | 37,139 | 16 | 64,146 | 34 | 28,622 | 31 | 38.4 | -12.4 | 47.6 | 11.2 | 64.7 | -17.4 |
| Peoria, Ill. | 66,950 | 283 | 5,981 | 49 | 63,061 | 35 | 45,288 | 19 | 2.5 | -2.7 | 4.4 | 35.6 | 1.6 | 41.2 |
| Toledo, Ohio. | 168,497 | 760 | 18,878 | 34 | 61,230 | 36 | 27,146 | 35 | 20.3 | 23.1 | 37.6 | 39.2 | 42.6 | 51.3 |
| Omaha, Nebr. | 124,096 | 432 | 8,023 | 46 | 60,854 | 37 | 17,439 | 46 | 37.8 | 10.3 | 12.7 | 41.8 | 57.0 | -38.8 |
| Dayton, Ohio. | 116,577 | 613 | 21,549 | 31 | 60,378 | 38 | 32,850 | 24 | 26.1 | 15.0 | 52.5 | 27.7 | 55.7 | 26.4 |
| Lowell, Mass. | 106,294 | 320 | 32,575 | 17 | 60,271 | 39 | 27,440 | 34 | 11.2 | 6.2 | 28.6 | 13.8 | 37.4 | -4.6 |
| Yonkers, N. Y. | 79,803 | 158 | 12,711 | 41 | 59,334 | 40 | 16,132 | 47 | 30.0 | 29.4 | 76.9 | 93.9 | 57.9 | 31.7 |
| St. Paul, Minn. | 214,744 | 719 | 19,339 | 33 | 58,990 | 41 | 28,690 | 30 | 34.6 | 10.3 | 53.9 | 27.5 | 52.4 | 23.1 |
| Kansas City, Mo. | 248,381 | 902 | 14,043 | 40 | 54,704 | 42 | 23,742 | 38 | 32.6 | 13.8 | 53.8 | 50.8 | 47.9 | 45.1 |
| New Bedford, Mass. | 96,652 | 207 | 26,566 | 26 | 53,238 | 43 | 24,674 | 37 | 48.8 | 17.0 | 80.7 | 26.0 | 84.4 | 15.2 |
| Denver, Colo. | 213,351 | 766 | 12,058 | 43 | 51,538 | 44 | 20,611 | 43 | 24.7 | 13.8 | 40.6 | -3.3 | 31.6 | 16.6 |
| Reading, Pa. | 96,071 | 482 | 24,145 | 29 | 51,135 | 45 | 21,287 | 42 | 33.7 | 6.9 | 67.7 | -6.7 | 54.5 | -12.1 |
| New Haven, Conn. | 133,605 | 590 | 23,547 | 30 | 51,071 | 46 | 26,752 | 36 | 9.8 | 21.8 | 28.8 | 13.7 | 26.5 | 12.7 |
| Seattle, Wash. | 237,194 | 751 | 11,331 | 44 | 50,569 | 47 | 21,584 | 39 | 77.3 | 43.9 | 99.0 | 65.8 | 98.1 | 71.0 |
| Waterbury, Conn. | 73,141 | 189 | 20,170 | 32 | 50,350 | 48 | 21,624 | 41 | 30.9 | 16.5 | 55.6 | 6.7 | 48.1 | 20.4 |
| Syracuse, N. Y. | 137,249 | 738 | 15,148 | 35 | 49,435 | 49 | 27,669 | 33 | 24.7 | 23.2 | 42.5 | 36.7 | 48.7 | 32.9 |
| Camden, N. J. | 94,538 | 365 | 16,527 | 38 | 49,138 | 50 | 21,754 | 40 | 30.5 | 63.5 | 45.3 | 86.9 | 65.3 | 74.9 |

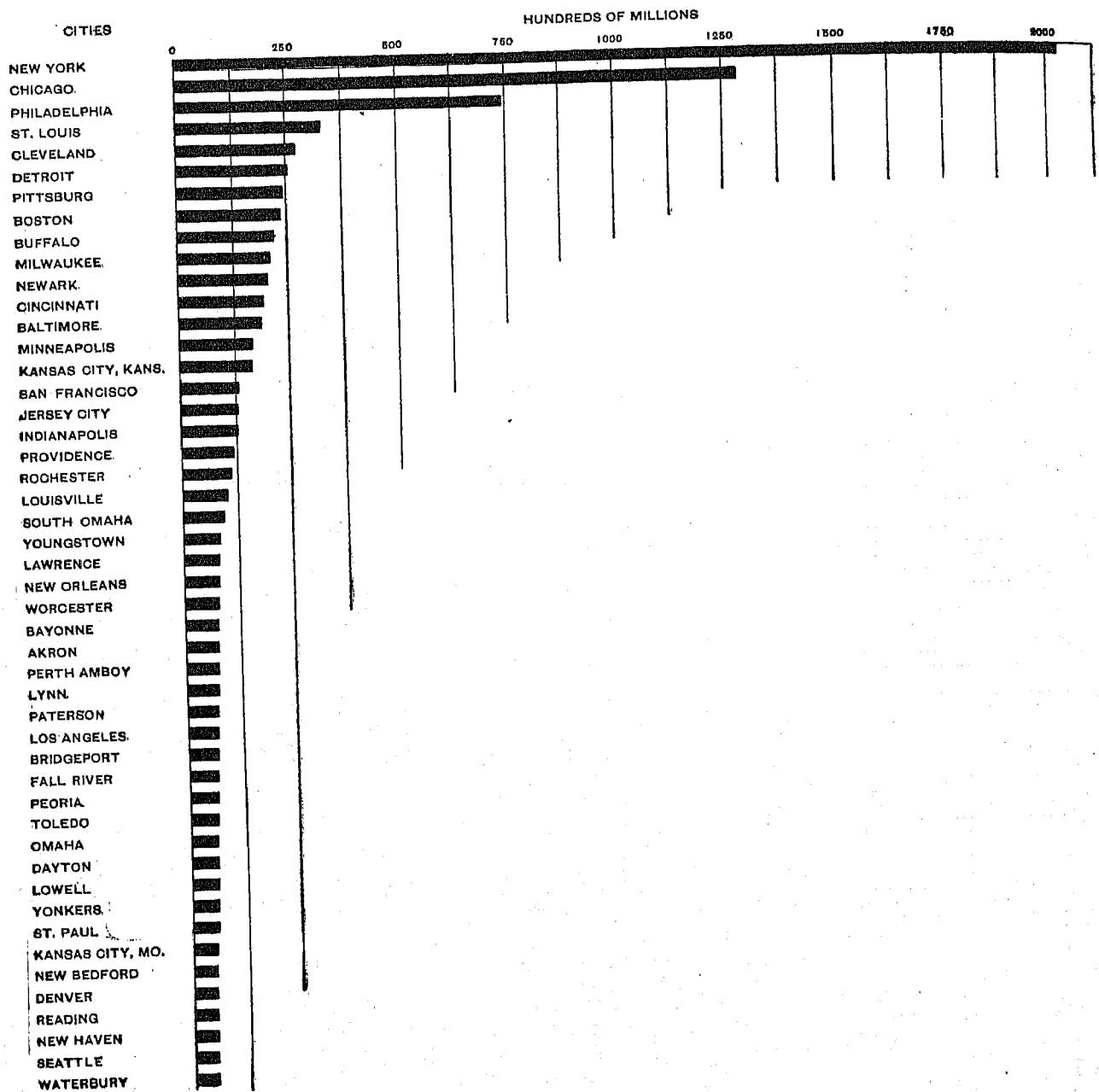
¹ Per cent of increase is based on figures in Table 113. A minus sign (—) denotes decrease.

Distribution according to size of communities.—It is a matter of interest to know the extent to which the manufacturing enterprises of the country are located in the larger cities as compared with the smaller cities and rural districts. Some indication of this is given in Table 8, on page 451, which distributes the total number of establishments, average number of wage earners, value of products, and value added by manufacture reported in 1909 and 1899 by classes of places, the classes distinguished being cities of 100,000 inhabitants or over, cities of 25,000 to 100,000 inhabitants, cities of 10,000 to 25,000 inhabitants, and the remainder of the country, the latter including the

smaller cities, towns, and other incorporated places and the rural districts. The aggregate population of each group in 1910 and 1900 is also given. Statistics for 1904 are not given because there was no Federal census of population for that year, and it is impossible to determine with accuracy what cities belonged to each group.

In considering this table it should be noted that each place is classed at each census according to its population at that census, so that the same community may be in one class in 1900 and in another class in 1910; and consequently the change in the totals for any given class of communities from 1899 to 1909 should not be

VALUE OF PRODUCTS FOR PRINCIPAL CITIES: 1909.



taken as measuring the increase in manufacturing business in the same communities. The significant figures are the percentages of the totals reported by each class of places at the two censuses. It should be noted further that the statistics of manufactures shown for any given community are those reported from establishments lying strictly within the municipal

boundaries. Since in many cases large manufacturing establishments are located just outside of city boundaries, the proportion of the manufacturing business of the country as a whole which, in a sense, can be properly credited to places of 10,000 or more inhabitants is somewhat greater than can be shown by the statistics in this table.

Table 8

| Table 8 | Year. | Aggregate. | CITIES AND TOWNS HAVING A POPULATION OF 10,000 AND OVER. | | | | | | | | DISTRICTS OUTSIDE OF CITIES AND TOWNS HAVING A POPULATION OF 10,000 AND OVER. | |
|--------------------------------------|--------------|------------------------------------|--|--|----------------------------------|--|----------------------------------|--|----------------------------------|--|---|--|
| | | | Total. | | 10,000 to 25,000. | | 25,000 to 100,000. | | 100,000 and over. | | | |
| | | | Number or amount. | Per cent dis- tribu- tion. | Number or amount. | Per cent dis- tribu- tion. | Number or amount. | Per cent dis- tribu- tion. | Number or amount. | Per cent dis- tribu- tion. | Number or amount. | Per cent dis- tribu- tion. |
| Number of cities..... | 1910 1900 | | 593 436 | | 365 277 | | 178 122 | | 50 37 | | | |
| Population..... | 1910 1900 | 91,972,266 75,994,575 | 34,002,092 24,052,070 | 37.0 31.7 | 5,495,594 4,297,118 | 6.0 5.7 | 8,204,960 5,547,205 | 8.9 7.3 | 20,302,136 14,206,347 | 22.1 18.7 | 57,969,574 51,941,905 | 63.0 68.3 |
| Number of establishments..... | 1909 1899 | 268,491 207,514 | 135,772 102,918 | 50.6 49.6 | 18,936 15,463 | 7.1 7.5 | 27,061 20,147 | 10.1 9.7 | 89,775 67,308 | 33.4 32.4 | 132,719 104,596 | 49.4 50.4 |
| Average number of wage earn- ers. | 1909 1899 | 6,615,046 4,712,763 | 4,316,642 3,044,439 | 65.3 64.6 | 678,467 524,900 | 10.3 11.1 | 1,126,253 767,293 | 17.0 16.3 | 2,511,922 1,752,249 | 38.0 37.2 | 2,296,404 1,668,324 | 34.7 35.4 |
| Value of products..... | 1909 1899 | \$20,672,051,870 11,406,926,701 | \$14,264,878,807 7,864,564,177 | 69.0 68.9 | \$1,946,403,215 1,052,639,594 | 9.4 9.2 | \$3,582,403,574 1,843,124,795 | 17.3 16.1 | \$8,735,772,018 4,908,799,788 | 42.3 43.6 | \$6,497,173,063 3,542,362,534 | 31.0 31.1 |
| Value added by manufacture.. | 1909 1899 | 8,529,260,992 4,831,075,210 | 6,003,005,285 3,377,477,927 | 70.4 69.9 | 801,766,297 458,679,363 | 9.4 9.5 | 1,431,652,146 773,117,708 | 16.8 16.0 | 3,769,586,842 2,145,680,856 | 44.2 44.4 | 2,526,255,707 1,433,597,253 | 29.6 30.1 |

In 1909 places of more than 10,000 inhabitants, although they included only 37 per cent of the total population of the country, contained a little over one-half of the total number of manufacturing establishments in the country. These establishments employed nearly two-thirds of the wage earners employed in manufactures (65.3 per cent), and reported more than two-thirds of the total value of products and of the value added by manufacture, the actual percentages being 69 and 70.4, respectively.

It is noteworthy, however, that, whereas communities of this size contained a materially larger proportion of the population of the country in 1910 than they did in 1900—37 per cent as against 31.7 per cent—there was only a very slight increase in their proportion of the total number of manufacturing establishments and of wage earners, and of the total value added by manufacture, and practically no change in their proportion of the total value of products. In other words, while these communities, considered as a

group, have perhaps a little more than held their own in relative importance in manufacturing industry, they have not gained in this respect commensurately with their gain in population. The foregoing statement regarding this group as a whole holds true likewise for the class of cities having from 25,000 to 100,000 inhabitants and for the class having 100,000 or more inhabitants, except that for the latter group there was a slight decrease in the proportion of the value of products and value added by manufacture. On the other hand, the class of communities having from 10,000 to 25,000 inhabitants reported a slight increase in its proportion of the total population in 1910 as compared with 1900, and a slightly larger proportion of the total value of products in 1909 than in 1899, although in respect to number of establishments, average number of wage earners, and value added by manufacture, the proportion for such communities was slightly lower in the later year than in the earlier.

PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.

Definitions and explanations.—Attention is called to certain differences between the census of 1909 and previous censuses in respect to the manner of collecting and presenting statistics of persons engaged in manufacturing industries.

At the censuses of 1899, 1904, and 1909 the following general classes of persons engaged in manufacturing industries were distinguished: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents and managers, (4) clerks, and (5)

wage earners. In the reports for the censuses of 1904 and 1899 these five classes were shown according to the three main groups: (1) Proprietors and firm members, (2) salaried officials, clerks, etc., and (3) wage earners. The second group included the three classes of salaried officers of corporations, superintendents and managers, and clerks. In certain tables relating exclusively to the present census a somewhat different grouping is employed—that into (1) proprietors and officials, (2) clerks, and (3) wage earners. The first

group includes proprietors and firm members, salaried officers of corporations, and superintendents and managers. In comparative tables covering the censuses of 1899 and 1904 it is of course necessary to group the figures for 1909 according to the same classification that was employed in the earlier censuses.

At this census the number of persons engaged in the industries, segregated by sex, and, in the case of wage earners, also by age (whether under 16 or 16 and over), was reported for December 15, or the nearest representative day. The 15th of December was selected as representing for most industries normal conditions of employment, but where conditions were exceptional, and particularly in the case of certain seasonal industries, such as canning, the December date could not be accepted as typical and an earlier date had to be chosen.

In the case of employees other than wage earners the number thus reported on December 15 or other representative day has been treated as equivalent to the average for the year, since the number of employees of this class does not vary much from month to month in a given industry. In the case of wage earners the average is obtained in the manner explained in the next paragraph.

In addition to the more detailed report by sex and age of the number of wage earners on December 15 or other representative day, a report was obtained of the number employed on the 15th of each month, without distinction of sex or age. From these figures the average number of wage earners for the year has been calculated by dividing the sum of the numbers reported each month by 12. The average thus obtained represents the number of wage earners that would be required to perform the work done if all were constantly employed during the entire year. Accordingly, the importance of any industry as an employer of labor is believed to be more accurately measured by this average than by the number employed at any one time or on a given day.

The number of wage earners reported for the representative day, though given in certain tables for each separate industry, is not totaled for all industries combined, because in view of the variations of date such a total is believed not to be significant. It would involve more or less duplication of persons working in different industries at different times, would not represent the total number employed in all industries at any one time, and would give an undue weight to seasonal industries as compared with industries in continual operation.

In particular, totals by sex and age for the wage earners reported for the representative day for all industries combined would be misleading because of the undue weight given to seasonal industries, in some of which, such as canning and preserving, the distribution of the wage earners by sex and age is materially

different from that in most industries of more regular operation. In order to determine as nearly as possible the sex and age distribution of the average number of wage earners for a given state as a whole, the per cent distribution by sex and age of the wage earners in each industry for December 15 or the nearest representative day has been calculated from the actual numbers reported for that date. The percentages thus obtained have been applied to the average number of wage earners for the year in that industry, to determine the average number of men, women, and children employed. These calculated averages for the several industries have been added up to give the average distribution for each state as a whole and for the entire country.

In 1899 and 1904 the schedule called for the average number of wage earners of each sex 16 years and over, and the average number under 16 years of age without distinction of sex, for each month, and these monthly statements were combined in an annual average. Comparatively few manufacturing concerns, however, keep their books in such way as to show readily the number of men, women, and children employed on the average each month. These monthly returns by sex and age were, in fact, largely estimates. It was believed that a more accurate and reliable sex and age distribution could be secured by taking as a basis of estimate the actual numbers employed on a single day.

Summary for United States: 1909.—The following table shows, for 1909, the distribution of the persons engaged in manufacturing, each class being distributed by sex, and the average number of wage earners by age also:

| CLASS. | PERSONS ENGAGED IN MANUFACTURES. | | |
|--|----------------------------------|------------------|------------------|
| | Total. | Male. | Female. |
| All classes..... | 7,678,578 | 6,162,263 | 1,516,315 |
| Proprietors and officials..... | 487,173 | 472,914 | 14,259 |
| Proprietors and firm members..... | 273,265 | 263,673 | 9,592 |
| Salaried officers of corporations..... | 80,735 | 78,937 | 1,798 |
| Superintendents and managers..... | 133,173 | 130,304 | 2,869 |
| Clerks..... | 576,359 | 437,056 | 139,303 |
| Wage earners (average number)..... | 6,615,046 | 5,252,293 | 1,362,753 |
| 16 years of age and over..... | 6,453,553 | 5,163,164 | 1,290,389 |
| Under 16 years of age..... | 161,493 | 89,129 | 72,364 |

The average number of persons engaged in manufacturing industries during 1909 was 7,678,578. Of these, 6,615,046, or 86.1 per cent, were wage earners; 487,173, or 6.3 per cent, proprietors and officials; and 576,359, or 7.5 per cent, clerks. Of the wage earners, 5,163,164 were males 16 years of age and over; 1,290,389 females 16 years of age and over; and 161,493 children under the age of 16.

Statistics of employees for the last three censuses are given for individual industries in Table 110, and for each state and geographic division in Table 111.

Occupational status by leading industries: 1909.—The following table shows for the 43 leading industries the number of proprietors, officers of corporations, superintendents and managers, clerks, and wage earners,

respectively, and the percentage which the persons included in each of the principal groups represent of the total number employed. The figures for wage earners represent the average number for the year.

Table 10

| INDUSTRY. | PERSONS ENGAGED IN MANUFACTURES. | | | | | | | | | |
|---|----------------------------------|----------------------------|-------------------------------|-------------------------------------|-------------------------------|---------|--------------------------------|----------------------------|---------|--------------------------------|
| | Total number. | Proprietors and officials. | | | | Clerks. | Wage earners (average number). | Per cent of total. | | |
| | | Total. | Proprietors and firm members. | Salaried officials of corporations. | Superintendents and managers. | | | Proprietors and officials. | Clerks. | Wage earners (average number). |
| All industries..... | 7,678,578 | 487,173 | 273,285 | 80,735 | 133,173 | 576,359 | 6,615,046 | 6.3 | 7.5 | 86.1 |
| Agricultural implements..... | 60,229 | 2,489 | 465 | 569 | 1,455 | 7,189 | 50,551 | 4.1 | 11.9 | 83.9 |
| Automobiles, including bodies and parts..... | 85,359 | 2,564 | 405 | 758 | 1,401 | 7,074 | 75,721 | 3.0 | 8.3 | 88.7 |
| Boots and shoes, including cut stock and findings..... | 215,923 | 5,752 | 1,838 | 1,027 | 2,887 | 11,874 | 198,287 | 2.7 | 5.6 | 91.6 |
| Brass and bronze products..... | 46,441 | 2,160 | 828 | 584 | 745 | 2,663 | 40,618 | 4.6 | 5.9 | 89.4 |
| Bread and other bakery products..... | 144,322 | 29,136 | 26,982 | 801 | 1,353 | 14,970 | 100,216 | 20.2 | 10.4 | 69.4 |
| Butter, cheese, and condensed milk..... | 31,508 | 10,480 | 8,019 | 1,032 | 1,429 | 2,595 | 18,491 | 33.3 | 8.2 | 58.5 |
| Canning and preserving..... | 71,972 | 6,920 | 4,244 | 968 | 1,708 | 5,064 | 58,968 | 9.6 | 7.1 | 83.3 |
| Carriages and wagons and materials..... | 82,944 | 8,844 | 6,213 | 1,166 | 1,466 | 4,172 | 69,928 | 10.7 | 8.0 | 81.3 |
| Cars and general shop construction and repairs by steam-railroad companies..... | 301,273 | 6,974 | 2 | 1,877 | 5,095 | 12,125 | 282,174 | 2.3 | 4.0 | 93.7 |
| Cars, steam-railroad, not including operations of railroad companies..... | 47,094 | 1,041 | 7 | 241 | 793 | 2,967 | 43,086 | 2.2 | 6.3 | 91.5 |
| Chemicals..... | 27,791 | 1,086 | 154 | 367 | 565 | 2,991 | 23,714 | 3.9 | 10.8 | 85.3 |
| Clothing, men's, including shirts..... | 271,437 | 12,041 | 8,502 | 1,059 | 2,450 | 19,706 | 239,696 | 4.4 | 7.3 | 88.3 |
| Clothing, women's..... | 179,021 | 9,281 | 6,452 | 842 | 1,987 | 15,997 | 153,743 | 5.2 | 8.9 | 85.9 |
| Confectionery..... | 54,854 | 3,862 | 1,832 | 706 | 784 | 6,554 | 44,638 | 6.1 | 12.5 | 81.4 |
| Copper, tin, and sheet-iron products..... | 86,934 | 7,269 | 4,423 | 1,288 | 1,558 | 6,050 | 73,615 | 8.4 | 7.0 | 84.7 |
| Cotton goods, including cotton small wares..... | 387,771 | 4,461 | 377 | 1,728 | 2,358 | 4,430 | 378,869 | 1.2 | 1.1 | 97.7 |
| Electrical machinery, apparatus, and supplies..... | 105,600 | 4,121 | 439 | 997 | 2,685 | 14,223 | 87,256 | 3.9 | 13.5 | 82.6 |
| Flour-mill and gristmill products..... | 69,054 | 18,763 | 14,570 | 1,486 | 2,707 | 7,838 | 39,453 | 26.4 | 11.9 | 59.7 |
| Foundry and machine-shop products..... | 615,485 | 31,605 | 9,851 | 9,348 | 12,406 | 52,569 | 531,011 | 5.1 | 8.6 | 86.3 |
| Furniture and refrigerators..... | 144,140 | 7,281 | 2,657 | 2,170 | 2,454 | 8,407 | 128,452 | 5.1 | 5.8 | 89.1 |
| Gas, illuminating and heating..... | 51,007 | 2,985 | 277 | 990 | 1,719 | 10,806 | 37,215 | 5.9 | 21.2 | 73.0 |
| Hosiery and knit goods..... | 136,130 | 3,308 | 1,134 | 799 | 1,375 | 3,547 | 129,275 | 2.4 | 2.6 | 95.0 |
| Iron and steel, blast furnaces..... | 43,061 | 1,119 | 48 | 262 | 809 | 3,513 | 38,429 | 2.6 | 8.2 | 89.2 |
| Iron and steel, steel works and rolling mills..... | 290,762 | 4,286 | 47 | 779 | 3,460 | 16,400 | 240,076 | 1.6 | 6.3 | 92.1 |
| Leather goods..... | 43,625 | 4,209 | 2,552 | 760 | 897 | 4,409 | 34,967 | 9.7 | 10.1 | 80.2 |
| Leather, tanned, curried, and finished..... | 67,100 | 2,331 | 784 | 629 | 918 | 2,567 | 62,202 | 3.5 | 3.8 | 92.7 |
| Liquors, distilled..... | 8,328 | 1,111 | 563 | 217 | 331 | 787 | 6,430 | 13.3 | 9.4 | 77.2 |
| Liquors, malt..... | 60,726 | 4,362 | 639 | 1,819 | 1,904 | 7,784 | 54,579 | 6.5 | 11.7 | 81.8 |
| Lumber and timber products..... | 784,989 | 68,165 | 48,825 | 6,616 | 12,724 | 21,806 | 695,019 | 8.7 | 2.8 | 88.5 |
| Marble and stone work..... | 77,275 | 8,453 | 6,026 | 867 | 1,560 | 2,219 | 65,608 | 10.9 | 4.2 | 84.9 |
| Oil, cottonseed, and cake..... | 21,273 | 2,167 | 110 | 576 | 1,481 | 2,085 | 17,071 | 10.2 | 9.6 | 80.2 |
| Paint and varnish..... | 21,596 | 2,016 | 456 | 793 | 767 | 5,640 | 14,240 | 9.2 | 25.8 | 65.0 |
| Paper and wood pulp..... | 81,473 | 2,298 | 250 | 773 | 1,275 | 3,197 | 75,978 | 2.8 | 3.9 | 93.3 |
| Patent medicines and compounds and druggists' preparations..... | 41,101 | 5,647 | 2,802 | 1,427 | 1,418 | 12,559 | 22,565 | 13.7 | 20.6 | 55.7 |
| Petroleum, refining..... | 16,640 | 671 | 42 | 211 | 418 | 2,040 | 13,929 | 4.0 | 12.3 | 83.7 |
| Printing and publishing..... | 388,466 | 49,332 | 30,424 | 7,265 | 11,643 | 80,700 | 258,434 | 12.7 | 20.8 | 66.5 |
| Silk and silk goods, including throwsters..... | 105,238 | 2,236 | 664 | 490 | 1,092 | 3,965 | 99,037 | 2.1 | 3.8 | 94.1 |
| Slaughtering and meat packing..... | 108,716 | 3,514 | 1,659 | 731 | 1,124 | 15,474 | 89,728 | 3.2 | 14.2 | 82.5 |
| Smelting and refining, copper..... | 16,832 | 275 | 7 | 53 | 215 | 929 | 15,628 | 1.6 | 5.5 | 92.8 |
| Smelting and refining, lead..... | 8,059 | 132 | ..... | 44 | 88 | 508 | 7,424 | 1.6 | 6.2 | 92.1 |
| Sugar and molasses, not including beet sugar..... | 15,658 | 789 | 204 | 140 | 445 | 1,343 | 13,526 | 5.0 | 8.6 | 86.4 |
| Tobacco manufactures..... | 107,637 | 21,012 | 17,634 | 809 | 2,569 | 9,815 | 166,810 | 10.6 | 5.0 | 84.4 |
| Woolen, worsted, and felt goods, and wool hats..... | 175,176 | 3,192 | 732 | 782 | 1,678 | 3,262 | 168,722 | 1.8 | 1.9 | 96.3 |
| All other industries..... | 1,916,361 | 117,932 | 59,096 | 23,811 | 35,025 | 149,958 | 1,648,441 | 6.2 | 7.8 | 86.0 |

The highest proportion of proprietors and officials shown for any individual industry covered by the table, 33.3 per cent, is for the butter, cheese, and condensed-milk industry. Many of the establishments in this industry are carried on by cooperative associations, and the practice in 1909, as at prior censuses, was not to include the members of such associations as proprietors in the totals, but to omit them altogether. From the information contained in the reports, it is impossible, in some instances, to distinguish such associations from partnerships, and the large number of proprietors and officials shown for this industry indicates the probability that the members of some associations were inadvertently included as partners. The high percentage of proprietors and

officials in the flour-mill and gristmill and the bakery industries is explained by the fact that the majority of the establishments are small and the work is to a large extent done by the proprietors or their immediate representatives, while in the large flour mills automatic machinery has reduced the amount of labor to a minimum.

A factor which has much to do with the proportion of clerks among the total number of employees in an industry is the method of marketing the product. Thus there are high percentages of clerks in the manufacture of patent medicines and compounds and druggists' preparations, and in the paint and varnish, illuminating-gas, and printing and publishing industries. In these industries the average num-

ber of customers or patrons for each establishment is large and this necessitates a large force of employees for soliciting trade, correspondence, accounting, and collection.

In general, though not in all cases, the larger the average size of establishments in an industry, the smaller is the proportion of proprietors, officials, and clerks, and the larger the proportion of wage earners. Thus the four textile industries—the cotton, woolen, hosiery and knit-goods, and silk-manufacturing industries—which are mainly conducted in large factories, show the largest proportions of wage earners. An unusually large proportion of wage earners is shown also for the paper and pulp mills, the steel works and rolling mills, the construction of steam-railroad cars, the smelting and refining of copper and lead, the tanning and finishing of leather, boots and shoes, and the repair shops of steam railroads.

Comparison with previous censuses as to occupational status.—In order to compare the distribution of persons engaged in manufacturing industries according to occupational status in 1909 with that shown at the census of 1904, it is necessary to use the classification employed at the earlier census. (See p. 451.) Such a comparison is made in the following table. Comparable figures for 1899 are not available.

Table 11

| CLASS. | PERSONS ENGAGED IN MANUFACTURES. | | | | |
|------------------------------------|----------------------------------|------------------------|-----------|------------------------|----------------------------------|
| | 1909 | | 1904 | | Per cent of increase, 1904-1909. |
| | Number. | Per cent distribution. | Number. | Per cent distribution. | |
| Total..... | 7,678,578 | 100.0 | 6,218,612 | 100.0 | 23.6 |
| Proprietors and firm members..... | 273,265 | 3.6 | 225,673 | 3.6 | 21.1 |
| Salaried employees..... | 790,267 | 10.3 | 619,556 | 8.4 | 52.1 |
| Wage earners (average number)..... | 6,615,046 | 86.1 | 5,402,383 | 88.0 | 21.0 |

A greater percentage of increase is shown for salaried employees than for the other two classes. This is due in part to the changes from individual and firm ownership to corporate organization, a change which frequently involves the transfer of proprietors and firm members to the class of officials. At the same time there is no doubt that the number of clerks here classified with the other salaried employees has increased relatively faster than the number of wage earners. This may indicate an increase of the practice on the part of the manufacturers of direct sale of

goods without the interposition of so many middlemen as formerly handled the product.

Sex and age distribution, by leading industries: 1909.—Table 12, on the opposite page, shows, for the 43 leading industries, the number and per cent distribution, by age and sex, of wage earners as reported for December 15, or the nearest representative day. As a means of judging the true importance of the several industries as employers of labor, the average number employed for the entire year is also given in each case, this number, in the case of seasonal industries, being much smaller than the number on the representative day. The per cent distribution for all industries combined, based on the average number employed as shown in Table 9, is also presented.

In all industries combined 78 per cent of the average number of wage earners were males 16 years of age or over, 19.5 per cent females 16 years of age or over, and 2.5 per cent children under the age of 16.

The industries for which the largest proportions of males 16 years of age or over are shown are those in which the work is of a nature requiring much physical strength or a high degree of skill. Thus in the smelting and refining of both copper and lead males 16 years of age or over constitute 99.9 per cent of the total number of wage earners, and in the blast furnaces they constitute 99.8 per cent. Other industries in which males of 16 years or over represent more than 99 per cent of the wage earners are the gas industry, construction of steam-railroad cars, steel works and rolling mills, marble and stone work, the repair shops of steam railroads, and the manufacture of cotton-seed oil.

The proportion of women and children, naturally, is larger in those industries in which the processes require dexterity rather than strength. In six of the industries covered by Table 12—the making of men's and women's clothing, the confectionery industry, and the manufacture of hosiery and knit goods, of patent medicines and compounds and druggists' preparations, and of silk and silk goods—more than half of the wage earners are females 16 years of age or over.

The proportion of wage earners under 16 years is larger in three of the textile industries—the cotton goods, silk and silk goods, and hosiery and knit-goods industries—than in any other of the principal industries of the country. The proportion is also relatively high in the canning and preserving, confectionery, and woolen-goods industries.

Table 12

| INDUSTRY. | WAGE EARNERS. | | | | | | | |
|---|-----------------|--|---------------------------|------------------|------------------------|---------------------------|----------------------|------------------------|
| | Average number. | Number Dec. 15, or nearest representative day. | | | | Per cent of total. | | |
| | | Total. | 16 years of age and over. | | Under 16 years of age. | 16 years of age and over. | | Under 16 years of age. |
| | | | Male. | Female. | | Male. | Female. | |
| All industries..... | 6,615,046 | (¹) | (¹) | (¹) | (¹) | 78.0 | 19.5 | 2.5 |
| Agricultural implements..... | 50,551 | 55,429 | 54,529 | 674 | 226 | 98.4 | 1.2 | 0.4 |
| Automobiles, including bodies and parts..... | 75,721 | 97,250 | 96,060 | 982 | 208 | 98.8 | 1.0 | 0.2 |
| Boots and shoes, including cut stock and findings..... | 198,297 | 211,507 | 132,411 | 70,457 | 8,639 | 62.6 | 33.3 | 4.1 |
| Brass and bronze products..... | 40,618 | 46,230 | 42,908 | 2,774 | 548 | 92.8 | 6.9 | 1.2 |
| Bread and other bakery products..... | 100,216 | 104,443 | 84,956 | 17,407 | 2,080 | 81.3 | 16.7 | 2.0 |
| Butter, cheese, and condensed milk..... | 18,431 | 19,323 | 17,743 | 1,468 | 112 | 91.8 | 7.6 | 0.1 |
| Canning and preserving..... | 59,968 | 155,847 | 67,219 | 77,593 | 11,035 | 43.1 | 49.8 | 7.6 |
| Carriages and wagons and materials..... | 69,928 | 72,783 | 71,104 | 1,126 | 553 | 97.7 | 1.5 | 0.8 |
| Cars and general shop construction and repairs by steam-railroad companies..... | 282,174 | 302,080 | 301,431 | 455 | 194 | 99.8 | 0.2 | 0.1 |
| Cars, steam-railroad, not including operations of railroad companies..... | 43,086 | 58,274 | 58,046 | 190 | 38 | 99.6 | 0.3 | 0.1 |
| Chemicals..... | 23,714 | 25,341 | 24,102 | 1,061 | 178 | 95.1 | 4.2 | 0.7 |
| Clothing, men's, including shirts..... | 239,696 | 257,128 | 109,139 | 142,781 | 5,208 | 42.4 | 55.5 | 2.9 |
| Clothing, women's..... | 153,743 | 162,859 | 58,316 | 103,063 | 1,480 | 35.8 | 63.3 | 0.9 |
| Confectionery..... | 44,638 | 52,421 | 18,836 | 30,453 | 3,132 | 35.9 | 58.1 | 6.0 |
| Copper, tin, and sheet-iron products..... | 73,615 | 78,909 | 66,797 | 9,716 | 2,396 | 84.6 | 12.3 | 3.9 |
| Cotton goods, including cotton small wares..... | 378,880 | 387,698 | 197,420 | 150,057 | 40,221 | 50.9 | 28.7 | 10.4 |
| Electrical machinery, apparatus, and supplies..... | 87,256 | 102,960 | 78,605 | 23,398 | 947 | 76.4 | 22.7 | 0.9 |
| Flour-mill and gristmill products..... | 39,453 | 42,495 | 41,787 | 555 | 143 | 98.3 | 1.3 | 0.3 |
| Foundry and machine-shop products..... | 531,011 | 604,167 | 587,636 | 11,895 | 4,636 | 97.3 | 2.0 | 0.8 |
| Furniture and refrigerators..... | 128,452 | 138,829 | 132,176 | 3,677 | 2,976 | 95.2 | 2.6 | 2.1 |
| Gas, illuminating and heating..... | 37,215 | 37,396 | 37,308 | 71 | 17 | 99.8 | 0.2 | (²) 8.1 |
| Hosiery and knit goods..... | 129,275 | 136,713 | 37,419 | 55,153 | 11,111 | 27.4 | 64.5 | 0.2 |
| Iron and steel, blast furnaces..... | 38,429 | 47,278 | 47,154 | 19 | 84 | 99.6 | (²) 9.4 | 0.5 |
| Iron and steel, steel works and rolling mills..... | 240,076 | 284,264 | 281,801 | 1,114 | 1,349 | 99.1 | 81.8 | 2.5 |
| Leather goods..... | 34,907 | 36,502 | 29,868 | 5,738 | 596 | 81.8 | 13.7 | 0.7 |
| Leather, tanned, curried, and finished..... | 62,202 | 66,717 | 64,005 | 2,230 | 482 | 95.9 | 3.2 | 0.1 |
| Liquors, distilled..... | 6,430 | 8,130 | 7,008 | 1,111 | 11 | 88.2 | 13.7 | 0.1 |
| Liquors, malt..... | 54,579 | 54,135 | 52,865 | 1,040 | 230 | 97.7 | 1.9 | 0.4 |
| Lumber and timber products..... | 695,019 | 838,160 | 828,978 | 4,027 | 7,155 | 98.7 | 0.5 | 0.9 |
| Marble and stone work..... | 65,603 | 67,921 | 67,575 | 112 | 112 | 99.5 | 0.2 | 0.3 |
| Oil, cottonseed, and cake..... | 17,071 | 29,691 | 29,551 | 49 | 91 | 99.5 | 0.2 | 0.3 |
| Paint and varnish..... | 14,240 | 14,426 | 13,207 | 1,137 | 82 | 91.5 | 7.9 | 0.6 |
| Paper and wood pulp..... | 75,978 | 78,672 | 68,497 | 9,909 | 266 | 87.1 | 12.6 | 0.3 |
| Patent medicines and compounds and druggists' preparations..... | 22,895 | 24,683 | 11,503 | 12,672 | 508 | 46.6 | 51.3 | 2.1 |
| Petroleum, refining..... | 13,929 | 14,657 | 14,657 | 170 | 46 | 98.5 | 1.1 | 0.3 |
| Printing and publishing..... | 258,434 | 272,027 | 204,388 | 60,973 | 6,066 | 75.1 | 22.4 | 2.4 |
| Silk and silk goods, including throwsters..... | 99,037 | 102,369 | 35,785 | 58,441 | 8,143 | 35.0 | 57.1 | 8.0 |
| Slaughtering and meat packing..... | 89,728 | 94,854 | 88,352 | 5,960 | 542 | 93.1 | 6.3 | 0.6 |
| Smelting and refining, copper..... | 15,628 | 16,029 | 16,013 | 16 | 16 | 99.9 | 0.1 | 0.1 |
| Smelting and refining, lead..... | 7,424 | 8,002 | 8,001 | 1 | 1 | 99.9 | (²) 1.5 | 0.5 |
| Sugar and molasses, not including beet sugar..... | 13,526 | 25,134 | 24,626 | 376 | 132 | 98.0 | 46.5 | 3.6 |
| Tobacco manufactures..... | 166,810 | 181,036 | 90,417 | 84,163 | 6,426 | 49.9 | 41.3 | 5.7 |
| Woolen, worsted, and felt goods, and wool hats..... | 168,722 | 175,171 | 92,820 | 72,409 | 9,942 | 53.0 | 41.3 | 5.7 |

¹ No totals given for reasons explained on page 452.² Less than one-tenth of 1 per cent.

In addition to the industries shown in the above table, which were selected according to their importance with respect to gross value of products, certain others are of interest because of the relatively large number of women and children employed. Table 13, on the following page, shows the sex and age distribution of wage earners in all industries not covered by the preceding table in which there were at least 5,000 women, or in which the women constituted over 40 per cent of the wage earners and numbered not less than 500.

The table shows that there are a large number of industries, some of considerable importance, in which women 16 years of age or over represent more than 40 per cent of the total number of wage earners. In the manufacture of corsets, of artificial flowers, feathers, and plumes, and of steel pens, more than 80 per cent

of the wage earners are women. Other industries in which female wage earners 16 years of age or over constitute over three-fourths of the total number employed are the manufacture of men's furnishing goods and of millinery and lace goods, and the grading, roasting, cleaning, and shelling of peanuts. Large numbers of women are also employed in several industries listed in this table in which, however, the proportion which these represent of the total number of wage earners is less than 40 per cent.

Of the industries shown in Table 13, those in which the proportion of children under 16 years of age exceeds 5 per cent are the manufacture of bags, other than paper; cigar boxes; fancy and paper boxes; horse clothing; cordage and twine; needles, pins, and hooks and eyes; lead pencils; stationery goods, not elsewhere specified; and the cork-cutting industry.

Table 13

| INDUSTRY. | WAGE EARNERS. | | | | | | | |
|---|-----------------|--|---------------------------|---------|------------------------|--------------------|---------|------------------------|
| | Average number. | Number Dec. 15, or nearest representative day. | | | | Per cent of total. | | |
| | | Total | 16 years of age and over. | | Under 16 years of age. | 16 years and over. | | Under 16 years of age. |
| | | | Male | Female. | | Male. | Female. | |
| Artificial flowers and feathers and plumes..... | 10,016 | 10,769 | 1,416 | 9,017 | 336 | 13.1 | 83.7 | 3.1 |
| Awnings, tents, and sails..... | 4,242 | 4,043 | 2,204 | 1,715 | 64 | 56.0 | 42.4 | 1.6 |
| Bags, other than paper..... | 7,908 | 8,437 | 2,870 | 4,794 | 773 | 34.0 | 56.8 | 9.2 |
| Bags, paper..... | 3,212 | 3,209 | 1,680 | 1,561 | 58 | 50.9 | 47.3 | 1.8 |
| Baking powders and yeast..... | 2,155 | 2,273 | 1,190 | 1,020 | 54 | 52.7 | 44.9 | 2.4 |
| Boots and shoes, rubber..... | 17,612 | 18,528 | 10,995 | 7,000 | 473 | 59.3 | 33.1 | 2.6 |
| Boxes, cigar..... | 6,115 | 6,554 | 2,914 | 3,260 | 380 | 44.5 | 49.7 | 5.8 |
| Boxes, fancy and paper..... | 30,514 | 43,239 | 14,198 | 25,061 | 3,080 | 32.8 | 60.0 | 7.1 |
| Buttons..... | 16,427 | 17,873 | 10,721 | 6,530 | 622 | 60.0 | 36.5 | 3.5 |
| Carpets and rugs, other than rag..... | 33,307 | 34,874 | 19,601 | 13,859 | 1,414 | 56.2 | 39.7 | 4.1 |
| Clocks and watches, including cases and materials..... | 23,857 | 25,574 | 15,775 | 9,262 | 537 | 61.7 | 36.2 | 2.1 |
| Clothing, horse..... | 1,048 | 1,780 | 580 | 1,047 | 162 | 32.4 | 58.5 | 9.1 |
| Cordage and twine and jute and linen goods..... | 25,820 | 26,941 | 13,019 | 12,083 | 1,839 | 48.3 | 44.8 | 6.8 |
| Cork, cutting..... | 3,142 | 3,239 | 1,756 | 1,310 | 173 | 54.2 | 40.4 | 5.3 |
| Corsets..... | 17,564 | 18,152 | 2,291 | 15,234 | 627 | 12.6 | 33.9 | 3.5 |
| Dyeing and finishing textiles..... | 44,046 | 45,841 | 36,486 | 8,269 | 1,086 | 79.6 | 18.0 | 2.4 |
| Fireworks..... | 1,408 | 1,380 | 756 | 564 | 60 | 54.8 | 40.9 | 4.3 |
| Flags, banners, regalia, society badges, and emblems..... | 3,572 | 3,552 | 1,267 | 2,192 | 93 | 35.7 | 61.7 | 2.6 |
| Flavoring extracts..... | 1,229 | 1,270 | 722 | 522 | 26 | 56.8 | 41.1 | 2.0 |
| Food preparations..... | 14,968 | 17,786 | 12,070 | 5,449 | 267 | 67.0 | 30.6 | 1.5 |
| Fur goods..... | 11,927 | 14,450 | 8,530 | 5,853 | 58 | 59.1 | 40.5 | 0.4 |
| Furnishing goods, men's..... | 38,482 | 41,070 | 9,153 | 31,926 | 891 | 21.8 | 76.1 | 2.1 |
| Gloves and mittens, leather..... | 11,354 | 12,188 | 5,202 | 6,697 | 289 | 42.7 | 54.9 | 2.4 |
| Gold and silver, leaf and foil..... | 1,383 | 1,417 | 612 | 756 | 49 | 43.2 | 53.4 | 3.5 |
| Hair work..... | 3,534 | 3,885 | 1,338 | 2,404 | 83 | 34.4 | 63.4 | 2.1 |
| Hats, fur-felt..... | 25,064 | 30,292 | 21,182 | 8,468 | 642 | 69.9 | 28.0 | 2.1 |
| Hats, straw..... | 8,314 | 10,328 | 3,512 | 6,641 | 175 | 34.0 | 64.3 | 1.7 |
| House-furnishing goods, not elsewhere specified..... | 4,907 | 5,371 | 2,713 | 2,670 | 88 | 50.5 | 47.8 | 1.6 |
| Jewelry..... | 30,347 | 33,914 | 23,330 | 9,645 | 933 | 68.8 | 28.4 | 2.8 |
| Jewelry and instrument cases..... | 2,070 | 2,343 | 1,045 | 1,239 | 59 | 44.0 | 52.9 | 2.5 |
| Millinery and lace goods..... | 39,201 | 40,522 | 8,061 | 31,290 | 1,171 | 19.9 | 77.2 | 2.9 |
| Needles, pins, and hooks and eyes..... | 4,038 | 4,955 | 2,202 | 2,313 | 380 | 45.6 | 46.7 | 7.7 |
| Paper goods, not elsewhere specified..... | 19,211 | 20,500 | 10,141 | 9,707 | 652 | 49.5 | 47.4 | 3.2 |
| Peanuts, grading, roasting, cleaning, and shelling..... | 1,940 | 2,846 | 473 | 1,833 | 40 | 20.2 | 78.1 | 1.7 |
| Pencils, lead..... | 4,154 | 4,412 | 1,843 | 2,244 | 325 | 41.8 | 50.9 | 7.4 |
| Pens, steel..... | 699 | 720 | 113 | 501 | 25 | 15.5 | 81.1 | 3.4 |
| Pottery, terra-cotta, and fire-clay products..... | 50,168 | 60,842 | 53,159 | 6,709 | 884 | 87.4 | 11.2 | 1.5 |
| Stationary goods, not elsewhere specified..... | 6,206 | 6,417 | 3,405 | 2,635 | 377 | 53.1 | 41.1 | 5.9 |
| Surgical appliances and artificial limbs..... | 4,241 | 4,440 | 2,193 | 2,113 | 134 | 49.4 | 47.6 | 3.0 |
| Umbrellas and canes..... | 5,472 | 5,837 | 2,586 | 3,017 | 234 | 44.3 | 51.7 | 4.0 |

Sex and age distribution, by states: 1909.—Table 14 shows, for each geographic division and each state, the distribution of wage earners by sex and age and the per cent that each class represents of the total average number of wage earners. The numbers of each sex and each age period are obtained by applying to the average number employed in each industry in each state the percentages of each age and sex in the number of wage earners reported for December 15, or the nearest representative day, and then totaling the result, as more fully explained on page 452.

The relative number of males 16 years of age or over, females 16 years of age or over, and children under 16 employed in each state depends primarily upon the character of the industries in that state, but the number of persons under 16 employed is also affected by the legislation of the several states with regard to child labor. The largest proportions of female wage earners 16 years of age or over are found in the New England and Middle Atlantic divisions,

owing chiefly to the importance of the textile and clothing industries in these divisions. Next to these two divisions in this respect ranks the South Atlantic division, and in this division appears the largest proportion of wage earners under 16 years of age, 6.3 per cent. This large proportion is due chiefly to the predominance of the textile industries in the South Atlantic states. The proportions of females 16 years of age or over and of children under 16 are lowest in the West South Central, Mountain, and Pacific divisions, where the textile and clothing industries are relatively unimportant.

Among the individual states the largest proportion of female wage earners 16 years of age or over, 32.3 per cent, is found in Rhode Island, and the next largest proportion in New Hampshire, followed closely by Massachusetts and New York. The proportion of children employed is largest in South Carolina, 12.9 per cent, and next largest in North Carolina. Among the Northern states Rhode Island shows the largest percentage of children.

Table 14

| DIVISION AND STATE. | AVERAGE NUMBER OF WAGE EARNERS. | | | | PER CENT OF TOTAL. | | |
|---------------------------|---------------------------------|---------------------------|-----------|------------------------|---------------------------|---------|------------------------|
| | Total. | 16 years of age and over. | | Under 16 years of age. | 16 years of age and over. | | Under 16 years of age. |
| | | Male. | Female. | | Male. | Female. | |
| United States..... | 6,615,046 | 5,163,164 | 1,290,389 | 161,493 | 78.1 | 19.5 | 2.4 |
| GEOGRAPHIC DIVISIONS: | | | | | | | |
| New England..... | 1,101,290 | 760,039 | 307,076 | 33,575 | 69.1 | 27.9 | 3.0 |
| Middle Atlantic..... | 2,207,747 | 1,618,967 | 544,316 | 44,464 | 73.3 | 24.7 | 2.0 |
| East North Central..... | 1,513,764 | 1,271,013 | 220,194 | 22,557 | 84.0 | 14.5 | 1.5 |
| West North Central..... | 374,337 | 311,140 | 57,471 | 5,726 | 83.1 | 15.4 | 1.5 |
| South Atlantic..... | 663,015 | 517,456 | 103,703 | 41,856 | 78.0 | 15.6 | 6.3 |
| East South Central..... | 261,772 | 228,788 | 24,995 | 7,989 | 87.4 | 9.5 | 3.1 |
| West South Central..... | 204,520 | 191,353 | 9,724 | 3,443 | 93.6 | 4.7 | 1.7 |
| Mountain..... | 75,435 | 71,142 | 3,834 | 459 | 94.3 | 5.1 | 0.6 |
| Pacific..... | 213,166 | 192,666 | 19,076 | 1,424 | 90.4 | 8.9 | 0.7 |
| NEW ENGLAND: | | | | | | | |
| Maine..... | 79,955 | 60,612 | 17,956 | 1,357 | 75.8 | 22.5 | 1.7 |
| New Hampshire..... | 78,058 | 53,574 | 23,888 | 1,196 | 68.1 | 30.4 | 1.5 |
| Vermont..... | 33,788 | 28,946 | 4,631 | 211 | 85.7 | 13.7 | 0.6 |
| Massachusetts..... | 584,559 | 390,544 | 173,280 | 20,735 | 66.8 | 29.6 | 3.5 |
| Rhode Island..... | 113,538 | 72,239 | 36,674 | 4,625 | 63.6 | 32.3 | 4.1 |
| Connecticut..... | 210,792 | 154,724 | 50,647 | 5,421 | 73.4 | 24.0 | 2.6 |
| MIDDLE ATLANTIC: | | | | | | | |
| New York..... | 1,003,981 | 702,037 | 293,525 | 7,819 | 70.0 | 29.2 | 0.8 |
| New Jersey..... | 326,223 | 236,499 | 82,188 | 7,538 | 72.5 | 25.2 | 2.3 |
| Pennsylvania..... | 877,543 | 679,831 | 168,605 | 29,107 | 77.5 | 19.2 | 3.3 |
| EAST NORTH CENTRAL: | | | | | | | |
| Ohio..... | 446,934 | 372,694 | 68,996 | 5,244 | 83.4 | 15.4 | 1.2 |
| Indiana..... | 186,984 | 161,117 | 22,255 | 3,612 | 86.2 | 11.9 | 1.9 |
| Illinois..... | 465,764 | 382,691 | 76,156 | 6,917 | 82.2 | 16.3 | 1.5 |
| Michigan..... | 231,499 | 197,777 | 31,205 | 2,517 | 85.4 | 13.5 | 1.1 |
| Wisconsin..... | 182,583 | 166,734 | 21,582 | 4,267 | 85.8 | 11.8 | 2.3 |
| WEST NORTH CENTRAL: | | | | | | | |
| Minnesota..... | 84,767 | 73,038 | 11,423 | 306 | 86.2 | 13.5 | 0.4 |
| Iowa..... | 61,635 | 51,128 | 9,460 | 1,047 | 83.0 | 15.3 | 1.7 |
| Missouri..... | 152,993 | 119,980 | 29,195 | 3,818 | 78.4 | 19.1 | 2.5 |
| North Dakota..... | 2,789 | 2,489 | 243 | 57 | 89.2 | 8.7 | 2.0 |
| South Dakota..... | 3,602 | 3,099 | 457 | 46 | 86.0 | 12.7 | 1.3 |
| Nebraska..... | 24,336 | 20,763 | 3,356 | 217 | 85.3 | 13.8 | 0.9 |
| Kansas..... | 44,215 | 40,643 | 3,337 | 235 | 91.9 | 7.5 | 0.5 |
| SOUTH ATLANTIC: | | | | | | | |
| Delaware..... | 21,238 | 17,205 | 3,504 | 529 | 81.0 | 16.5 | 2.5 |
| Maryland..... | 107,921 | 72,416 | 28,957 | 6,548 | 67.1 | 26.8 | 6.1 |
| District of Columbia..... | 7,707 | 6,861 | 827 | 19 | 89.0 | 10.7 | 0.2 |
| Virginia..... | 105,676 | 88,191 | 13,863 | 3,622 | 83.5 | 13.1 | 3.4 |
| West Virginia..... | 63,893 | 58,335 | 4,505 | 1,053 | 91.3 | 7.1 | 1.6 |
| North Carolina..... | 121,473 | 86,082 | 21,693 | 13,698 | 70.9 | 17.9 | 11.3 |
| South Carolina..... | 73,046 | 50,848 | 12,793 | 9,405 | 69.6 | 17.5 | 12.9 |
| Georgia..... | 104,588 | 83,998 | 14,549 | 6,041 | 80.3 | 13.9 | 5.8 |
| Florida..... | 57,473 | 53,520 | 3,012 | 941 | 93.1 | 5.2 | 1.6 |
| EAST SOUTH CENTRAL: | | | | | | | |
| Kentucky..... | 65,400 | 55,072 | 9,495 | 833 | 84.2 | 14.5 | 1.3 |
| Tennessee..... | 73,840 | 63,016 | 8,379 | 2,445 | 85.3 | 11.3 | 3.1 |
| Alabama..... | 72,148 | 63,413 | 5,082 | 3,653 | 87.9 | 7.0 | 5.3 |
| Mississippi..... | 50,384 | 47,287 | 2,039 | 1,058 | 93.9 | 4.0 | 2.1 |
| WEST SOUTH CENTRAL: | | | | | | | |
| Arkansas..... | 44,982 | 43,703 | 694 | 525 | 97.3 | 1.5 | 1.2 |
| Louisiana..... | 76,165 | 70,153 | 4,473 | 1,539 | 92.1 | 5.9 | 2.0 |
| Oklahoma..... | 13,143 | 12,345 | 675 | 123 | 93.9 | 5.1 | 0.9 |
| Texas..... | 70,230 | 65,092 | 3,882 | 1,256 | 92.7 | 5.5 | 1.8 |
| MOUNTAIN: | | | | | | | |
| Montana..... | 11,655 | 11,436 | 189 | 30 | 98.1 | 1.6 | 0.3 |
| Idaho..... | 8,220 | 8,035 | 155 | 30 | 97.7 | 1.9 | 0.4 |
| Wyoming..... | 2,867 | 2,810 | 45 | 12 | 98.0 | 1.6 | 0.4 |
| Colorado..... | 28,067 | 25,808 | 2,094 | 165 | 92.0 | 7.5 | 0.6 |
| New Mexico..... | 4,143 | 3,995 | 82 | 66 | 96.4 | 2.0 | 1.6 |
| Arizona..... | 6,441 | 6,366 | 38 | 37 | 98.8 | 0.6 | 0.6 |
| Utah..... | 11,785 | 10,470 | 1,205 | 110 | 88.8 | 10.2 | 0.9 |
| Nevada..... | 2,257 | 2,222 | 26 | 9 | 98.4 | 1.2 | 0.4 |
| PACIFIC: | | | | | | | |
| Washington..... | 69,120 | 66,042 | 2,812 | 266 | 95.5 | 4.1 | 0.4 |
| Oregon..... | 28,750 | 26,406 | 2,246 | 98 | 91.8 | 7.8 | 0.3 |
| California..... | 115,296 | 100,218 | 14,018 | 1,060 | 86.9 | 12.2 | 0.9 |

Comparison with previous censuses as to sex and age.—The following table shows, for all industries combined, the distribution of the average number of wage earners according to age periods, and in the case of those 16 years of age or over according to sex, for 1909, 1904, and 1899. As already explained (p. 452), the distribution for 1909 is estimated on the basis of the actual proportions reported for a single represent-

ative day, while the figures for the other two censuses represent averages computed from the number of each class reported for each month of the year.

Table 15

| CLASS. | AVERAGE NUMBER OF WAGE EARNERS. | | | | | |
|---------------------------|---------------------------------|------------------------|-----------|------------------------|-----------|------------------------|
| | 1909 | | 1904 | | 1899 | |
| | Number. | Per cent distribution. | Number. | Per cent distribution. | Number. | Per cent distribution. |
| Total..... | 6,615,046 | 100.0 | 5,468,383 | 100.0 | 4,712,763 | 100.0 |
| 16 years of age and over. | 6,453,553 | 97.6 | 5,308,498 | 97.1 | 4,551,487 | 96.6 |
| Male..... | 5,163,164 | 78.1 | 4,242,642 | 77.6 | 3,632,577 | 77.1 |
| Female..... | 1,290,389 | 19.5 | 1,065,855 | 19.5 | 918,519 | 19.5 |
| Under 16 years of age.. | 161,493 | 2.4 | 159,885 | 2.9 | 161,276 | 3.4 |

From an examination of this table it will be seen that, while the numbers of men and women workers increased at each census, the number of children under 16 years of age has been comparatively stationary. For all industries combined there was a slight net increase during the 10 years in the number of children employed, although from 1899 to 1904 the number decreased. The percentage which children represent of the total number of wage earners, however, decreased from census to census. The proportion of adult female wage earners has been the same at each census, while the proportion of adult males has increased slightly.

Comparison of sex and age distribution in selected industries: 1909, 1904, and 1899.—Table 16 shows, in percentages, the distribution of wage earners according to sex and age periods, in 1909, 1904, and 1899, for all industries of any importance in which the proportion of women and children is relatively high or in which the absolute number of women and children is large. The percentages for the three years are comparable though not precisely parallel, for the reason that those for 1909 relate to the number employed on December 15, or the nearest representative day, which in the case of many establishments in some industries was in another month than December, while those for 1904 and 1899 (in which years reports were made for each month of the average number of wage earners by sex and age) are based upon the average number in each group for the month of December. Nevertheless, the figures should be very closely comparable for nearly all industries.

In about three-fifths of the 61 industries shown in this table the number of females 16 years of age or over and of children under the age of 16, taken together, formed a smaller proportion of the wage earners reported for December in 1909 than in 1899, or, in other words, the proportion of males 16 years of age or over increased during the decade. In the cotton-goods industry, in which the number of women and children is greater than in any other industry, each of these classes represented a smaller

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percentage of the total number of wage earners in 1909 than in 1899. Similar changes have occurred in the men's clothing and the hosiery and knit-goods industries, both of which are important as employers of women and children. In the silk and woolen industries the proportion of women has increased slightly, but the proportion of children under 16 has decreased. For the tobacco-products industry, in which the proportion of

children has likewise decreased, a marked increase is shown in the proportion of women employed.

Among the 61 industries listed in the table there were 22 in which the percentage of children was higher in 1909 than in 1899, but most of these are relatively unimportant industries. The most conspicuous increase in the proportion of children employed is in the manufacture of bags, other than paper.

Table 16

| INDUSTRY. | PER CENT OF ALL WAGE EARNERS EMPLOYED. ¹ | | | | | | | | |
|---|---|------|-------|---------|------|-------|------------------------|------|-------|
| | 10 years of age and over. | | | | | | Under 16 years of age. | | |
| | Male. | | | Female. | | | | | |
| | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 |
| Artificial flowers and feathers and plumes..... | 13.1 | 14.1 | 12.9 | 83.7 | 80.7 | 79.1 | 3.1 | 5.2 | 8.0 |
| Awnings, tents, and sails..... | 56.0 | 59.5 | 65.1 | 42.4 | 39.4 | 34.0 | 1.6 | 1.2 | 0.9 |
| Bags, other than paper..... | 34.0 | 34.0 | 31.3 | 56.8 | 60.2 | 65.3 | 0.2 | 5.9 | 3.4 |
| Bags, paper..... | 50.9 | 52.0 | 53.6 | 47.3 | 45.2 | 45.4 | 1.8 | 2.7 | 1.0 |
| Baking powders and yeast..... | 52.7 | 47.0 | 49.9 | 44.9 | 51.3 | 48.4 | 2.4 | 1.7 | 1.7 |
| Boots and shoes, including cut stock and findings..... | 62.6 | 63.4 | 63.6 | 33.3 | 33.2 | 33.4 | 4.1 | 3.4 | 3.1 |
| Boots and shoes, rubber..... | 59.3 | 57.1 | 60.3 | 38.1 | 39.8 | 38.2 | 2.6 | 3.1 | 1.5 |
| Boxes, cigar..... | 44.5 | 44.5 | 46.4 | 49.7 | 50.0 | 49.4 | 5.8 | 5.5 | 4.2 |
| Boxes, fancy and paper..... | 32.8 | 29.3 | 27.9 | 60.0 | 64.5 | 65.9 | 7.1 | 6.2 | 6.2 |
| Bread and other bakery products..... | 81.3 | 79.6 | 79.2 | 16.7 | 18.1 | 17.7 | 2.0 | 2.3 | 3.1 |
| Buttons..... | 60.0 | 50.8 | 47.4 | 36.5 | 45.9 | 47.2 | 3.5 | 3.3 | 5.4 |
| Canning and preserving..... | 43.1 | 48.2 | 55.0 | 49.8 | 45.7 | 40.0 | 7.1 | 6.1 | 4.4 |
| Carpets and rugs, other than rag..... | 56.2 | 51.0 | 48.4 | 39.7 | 43.3 | 44.1 | 4.1 | 5.7 | 7.5 |
| Clocks and watches, including cases and materials..... | 61.7 | 61.8 | 63.8 | 36.2 | 36.9 | 34.4 | 2.1 | 1.4 | 1.8 |
| Clothing, horse..... | 32.4 | 36.8 | 25.2 | 58.5 | 56.6 | 65.5 | 9.1 | 6.6 | 9.2 |
| Clothing, men's, including shirts..... | 42.4 | 37.6 | 33.9 | 55.5 | 60.0 | 63.4 | 2.0 | 2.4 | 2.6 |
| Clothing, women's..... | 35.8 | 34.9 | 29.6 | 63.3 | 64.4 | 69.4 | 0.9 | 0.8 | 0.9 |
| Coffee and spice, roasting and grinding..... | 59.4 | 60.3 | 51.9 | 39.1 | 38.3 | 40.1 | 1.4 | 1.4 | 2.0 |
| Confectionery..... | 35.9 | 35.9 | 44.7 | 58.1 | 59.3 | 49.8 | 6.0 | 4.8 | 5.4 |
| Copper, tin, and sheet-iron products..... | 84.6 | 85.0 | 86.7 | 12.3 | 12.4 | 9.2 | 3.0 | 2.6 | 4.1 |
| Cordage and twine and jute and linen goods..... | 48.3 | 57.6 | 55.2 | 44.8 | 35.6 | 36.8 | 6.8 | 6.7 | 8.1 |
| Cork, cutting..... | 54.2 | 45.1 | 43.8 | 40.4 | 46.7 | 48.2 | 5.3 | 8.3 | 8.0 |
| Corsets..... | 12.6 | 10.9 | 9.9 | 83.0 | 86.3 | 87.4 | 3.5 | 2.8 | 2.7 |
| Cotton goods, including cotton small wares..... | 50.9 | 40.6 | 44.8 | 88.7 | 40.5 | 41.0 | 10.4 | 12.9 | 13.3 |
| Dyeing and finishing textiles..... | 79.6 | 80.2 | 81.0 | 18.0 | 15.9 | 14.4 | 2.4 | 3.9 | 3.7 |
| Electrical machinery, apparatus, and supplies..... | 76.4 | 80.6 | 82.8 | 22.7 | 18.3 | 15.8 | 0.9 | 1.0 | 1.5 |
| Fireworks..... | 54.8 | 55.7 | 54.7 | 40.9 | 39.0 | 36.7 | 4.3 | 5.3 | 8.6 |
| Flags, banners, regalia, society badges, and emblems..... | 35.7 | 32.8 | 28.2 | 61.7 | 65.6 | 68.9 | 2.6 | 1.6 | 2.9 |
| Flavoring extracts..... | 56.8 | 51.7 | 51.2 | 41.1 | 46.5 | 46.5 | 2.0 | 1.8 | 2.3 |
| Food preparations..... | 67.9 | 59.0 | 65.6 | 30.6 | 39.2 | 31.7 | 1.5 | 1.8 | 2.7 |
| Foundry and machine-shop products..... | 97.3 | 97.3 | 97.7 | 2.0 | 1.9 | 1.4 | 0.8 | 0.8 | 0.9 |
| Fur goods..... | 59.1 | 57.3 | 45.3 | 40.5 | 42.3 | 53.0 | 0.4 | 0.4 | 0.7 |
| Furnishing goods, men's..... | 21.8 | 14.1 | 14.7 | 76.1 | 84.3 | 85.3 | 2.1 | 1.6 | 2.0 |
| Gloves and mittens, leather..... | 42.7 | 39.6 | 30.9 | 54.9 | 58.3 | 67.1 | 2.4 | 2.1 | 2.0 |
| Gold and silver, leaf and foil..... | 43.2 | 45.6 | 51.0 | 53.4 | 51.8 | 40.8 | 3.5 | 2.8 | 2.2 |
| Hair work..... | 34.4 | 17.8 | 13.9 | 63.4 | 80.5 | 85.8 | 2.1 | 1.7 | 0.4 |
| Hats, fur-felt..... | 69.9 | 70.3 | 70.2 | 28.0 | 27.6 | 28.4 | 2.1 | 2.1 | 1.4 |
| Hats, straw..... | 34.0 | 33.4 | ..... | 64.3 | 65.6 | ..... | 1.7 | 0.9 | ..... |
| Hosiery and knit goods..... | 27.4 | 24.2 | 25.0 | 64.5 | 66.2 | 64.5 | 8.1 | 9.6 | 10.5 |
| House-furnishing goods, not elsewhere specified..... | 50.5 | 56.0 | 57.3 | 47.8 | 41.5 | 40.5 | 1.6 | 2.5 | 2.2 |
| Jewelry..... | 68.8 | 71.9 | 67.2 | 28.4 | 26.1 | 31.0 | 2.8 | 2.0 | 1.8 |
| Jewelry and instrument cases..... | 44.6 | 47.7 | 43.5 | 52.9 | 51.0 | 47.5 | 2.5 | 1.3 | 4.0 |
| Leather goods..... | 81.8 | 79.7 | 84.4 | 15.7 | 17.3 | 12.3 | 2.5 | 3.0 | 3.3 |
| Mattresses and spring beds..... | 79.9 | 79.7 | 77.0 | 18.4 | 18.8 | 20.4 | 1.7 | 1.5 | 2.6 |
| Millinery and lace goods..... | 19.9 | 13.4 | 16.9 | 77.2 | 85.1 | 81.9 | 2.9 | 1.5 | 1.2 |
| Needles, pins, and hooks and eyes..... | 45.6 | 47.5 | 50.9 | 46.7 | 46.5 | 44.0 | 7.7 | 6.0 | 5.1 |
| Paper and wood pulp..... | 87.1 | 85.9 | 83.2 | 12.6 | 13.7 | 16.5 | 0.3 | 0.4 | 0.4 |
| Paper goods, not elsewhere specified..... | 40.5 | 41.5 | 46.0 | 47.4 | 55.3 | 51.6 | 3.2 | 3.2 | 2.4 |
| Patent medicines and compounds and druggists' preparations..... | 46.6 | 42.2 | 44.5 | 51.3 | 55.4 | 53.9 | 2.1 | 2.4 | 1.6 |
| Peanuts, grading, roasting, cleaning, and shelling..... | 20.2 | 19.7 | ..... | 78.1 | 75.4 | ..... | 1.7 | 4.9 | ..... |
| Pencils, lead..... | 41.8 | 42.1 | 35.8 | 50.9 | 54.0 | 51.9 | 7.4 | 3.8 | 12.3 |
| Pens, steel..... | 15.5 | 9.3 | 13.6 | 81.1 | 83.7 | 78.8 | 3.4 | 7.0 | 7.6 |
| Pottery, terra-cotta, and fire-clay products..... | 87.4 | 85.8 | 87.2 | 11.2 | 11.8 | 10.5 | 1.5 | 2.4 | 2.3 |
| Printing and publishing..... | 75.1 | 74.5 | 74.8 | 22.4 | 22.9 | 20.6 | 2.4 | 2.6 | 4.7 |
| Silk and silk goods, including throwsters..... | 35.0 | 34.1 | 36.6 | 57.1 | 56.7 | 53.4 | 8.0 | 9.2 | 10.0 |
| Slaughtering and meat packing..... | 93.1 | 92.0 | 93.1 | 6.3 | 6.7 | 4.5 | 0.6 | 1.2 | 2.4 |
| Stationery goods, not elsewhere specified..... | 53.1 | 49.6 | 42.9 | 41.1 | 46.5 | 50.7 | 5.9 | 3.9 | 5.4 |
| Surgical appliances and artificial limbs..... | 49.4 | 48.4 | 54.3 | 47.6 | 49.8 | 40.3 | 3.0 | 1.8 | 6.4 |
| Tobacco manufactures..... | 40.9 | 54.1 | 57.8 | 46.5 | 41.3 | 37.6 | 3.6 | 4.6 | 4.7 |
| Umbrellas and canes..... | 44.3 | 39.3 | 39.9 | 51.7 | 56.0 | 56.0 | 4.0 | 4.7 | 4.1 |
| Woolen, worsted, and felt goods, and wool hats..... | 53.0 | 52.8 | 53.0 | 41.3 | 39.6 | 39.7 | 5.7 | 7.6 | 7.2 |

¹ For 1904 and 1899 the percentages are based on the average numbers reported for the month of December; for 1909, on the number employed on Dec. 15, or the nearest representative day.

Comparison of sex and age distribution, by states: 1909, 1904, and 1899.—Table 17 shows, for each geographic division and state, for 1909, 1904, and 1899, respectively, the percentage of the average number of wage earners employed during the year represented by males 16 years of age or over, females 16

years of age or over, and children under 16 years of age. For 1909 the percentages have been computed from the returns for a representative day in the manner described on page 452; for the other two years the bases of calculation are average numbers computed for the year from the returns made for each month.

Table 17

PER CENT OF AVERAGE NUMBER OF WAGE EARNERS.

| DIVISION AND STATE. | 16 years of age and over. | | | | | | | | |
|---------------------------|---------------------------|------|------|---------|------|------|------------------------|------|------|
| | Male. | | | | | | Under 16 years of age. | | |
| | Male. | | | Female. | | | Under 16 years of age. | | |
| | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 |
| United States..... | 78.1 | 77.6 | 77.1 | 19.5 | 19.5 | 19.5 | 2.4 | 2.9 | 3.4 |
| GEOGRAPHIC DIVISIONS: | | | | | | | | | |
| New England..... | 69.1 | 69.1 | 68.4 | 27.9 | 28.0 | 28.7 | 3.0 | 2.9 | 2.9 |
| Middle Atlantic..... | 73.3 | 73.9 | 73.3 | 24.7 | 23.5 | 23.4 | 2.0 | 2.7 | 3.3 |
| East North Central..... | 84.0 | 83.8 | 84.4 | 14.5 | 14.5 | 13.2 | 1.5 | 1.7 | 2.4 |
| West North Central..... | 83.1 | 83.6 | 83.4 | 15.4 | 14.2 | 13.6 | 1.5 | 2.3 | 3.0 |
| South Atlantic..... | 78.0 | 75.4 | 74.7 | 15.6 | 17.0 | 17.4 | 6.3 | 7.6 | 7.9 |
| East South Central..... | 87.4 | 85.9 | 86.2 | 9.5 | 9.7 | 9.0 | 3.1 | 4.3 | 4.8 |
| West South Central..... | 93.6 | 92.6 | 91.3 | 4.7 | 5.5 | 6.4 | 1.7 | 1.9 | 2.4 |
| Mountain..... | 94.3 | 93.6 | 94.4 | 5.1 | 5.2 | 4.2 | 0.6 | 1.3 | 1.3 |
| Pacific..... | 90.4 | 88.6 | 85.5 | 8.9 | 10.3 | 12.6 | 0.7 | 1.2 | 1.9 |
| NEW ENGLAND: | | | | | | | | | |
| Maine..... | 75.8 | 75.6 | 72.1 | 22.5 | 22.4 | 24.8 | 1.7 | 2.0 | 3.1 |
| New Hampshire..... | 68.1 | 68.1 | 67.1 | 30.4 | 30.5 | 30.4 | 1.5 | 1.5 | 2.4 |
| Vermont..... | 85.7 | 85.5 | 85.0 | 13.7 | 13.8 | 14.1 | 0.6 | 0.7 | 0.9 |
| Massachusetts..... | 66.8 | 66.9 | 66.6 | 29.6 | 30.1 | 30.6 | 3.0 | 3.0 | 2.8 |
| Rhode Island..... | 63.6 | 63.0 | 62.7 | 32.3 | 31.6 | 31.6 | 4.1 | 5.4 | 5.7 |
| Connecticut..... | 73.4 | 73.1 | 72.3 | 24.0 | 24.5 | 25.6 | 2.6 | 2.4 | 2.1 |
| MIDDLE ATLANTIC: | | | | | | | | | |
| New York..... | 70.0 | 70.4 | 69.3 | 29.2 | 28.6 | 29.0 | 0.8 | 0.9 | 1.7 |
| New Jersey..... | 72.5 | 73.4 | 73.3 | 25.2 | 23.6 | 23.1 | 3.2 | 3.0 | 3.7 |
| Pennsylvania..... | 77.5 | 77.9 | 77.7 | 19.2 | 17.6 | 17.4 | 3.3 | 4.5 | 4.9 |
| EAST NORTH CENTRAL: | | | | | | | | | |
| Ohio..... | 83.4 | 83.4 | 84.0 | 15.4 | 15.2 | 14.7 | 1.2 | 1.4 | 1.3 |
| Indiana..... | 80.2 | 85.3 | 86.0 | 11.9 | 12.5 | 11.4 | 1.9 | 2.2 | 2.5 |
| Illinois..... | 82.2 | 82.8 | 82.6 | 16.3 | 15.9 | 14.4 | 1.5 | 1.3 | 3.0 |
| Michigan..... | 85.4 | 84.3 | 83.2 | 13.5 | 13.8 | 12.2 | 1.1 | 1.9 | 1.6 |
| Wisconsin..... | 85.8 | 85.4 | 86.0 | 11.8 | 11.9 | 9.9 | 2.3 | 2.7 | 4.0 |
| WEST NORTH CENTRAL: | | | | | | | | | |
| Minnesota..... | 86.2 | 87.4 | 88.5 | 13.5 | 12.1 | 10.4 | 0.4 | 0.5 | 1.1 |
| Iowa..... | 83.0 | 83.0 | 83.1 | 15.3 | 14.8 | 12.9 | 1.7 | 2.2 | 4.0 |
| Missouri..... | 78.4 | 79.5 | 78.1 | 19.1 | 17.1 | 18.5 | 2.5 | 3.4 | 3.5 |
| North Dakota..... | 89.2 | 86.7 | 90.7 | 8.7 | 11.3 | 6.8 | 2.0 | 2.0 | 2.5 |
| South Dakota..... | 89.0 | 87.4 | 91.4 | 12.7 | 11.2 | 3.6 | 1.3 | 1.3 | 4.9 |
| Nebraska..... | 88.3 | 85.5 | 86.9 | 13.8 | 12.5 | 9.2 | 0.9 | 2.0 | 3.9 |
| Kansas..... | 91.9 | 90.4 | 89.9 | 7.5 | 7.6 | 7.2 | 0.5 | 2.0 | 2.9 |
| SOUTH ATLANTIC: | | | | | | | | | |
| Delaware..... | 81.0 | 80.5 | 79.8 | 16.5 | 16.0 | 16.1 | 2.5 | 3.5 | 4.1 |
| Maryland..... | 67.1 | 67.4 | 65.5 | 26.8 | 26.6 | 28.6 | 6.1 | 5.9 | 6.0 |
| District of Columbia..... | 89.0 | 89.1 | 87.1 | 10.7 | 9.7 | 11.7 | 0.2 | 1.2 | 1.2 |
| Virginia..... | 83.5 | 81.0 | 79.5 | 13.1 | 14.9 | 14.9 | 3.4 | 4.0 | 5.5 |
| West Virginia..... | 91.3 | 90.0 | 89.0 | 7.1 | 7.4 | 8.5 | 1.6 | 2.6 | 2.4 |
| North Carolina..... | 70.5 | 64.9 | 65.0 | 17.8 | 21.4 | 20.9 | 11.3 | 13.6 | 14.1 |
| South Carolina..... | 69.6 | 63.3 | 61.9 | 17.5 | 20.2 | 20.1 | 12.9 | 16.4 | 18.0 |
| Georgia..... | 80.3 | 78.5 | 80.4 | 13.9 | 13.6 | 12.1 | 5.8 | 7.9 | 7.5 |
| Florida..... | 93.1 | 94.2 | 94.8 | 5.2 | 5.0 | 4.3 | 1.6 | 0.8 | 0.9 |
| EAST SOUTH CENTRAL: | | | | | | | | | |
| Kentucky..... | 84.2 | 82.8 | 84.1 | 14.5 | 13.9 | 11.8 | 1.3 | 3.3 | 4.2 |
| Tennessee..... | 85.3 | 85.4 | 85.1 | 11.3 | 10.9 | 10.6 | 3.3 | 3.6 | 4.3 |
| Alabama..... | 87.9 | 86.0 | 87.0 | 7.0 | 7.3 | 6.6 | 5.1 | 6.6 | 6.5 |
| Mississippi..... | 93.9 | 91.4 | 90.8 | 4.0 | 5.3 | 5.4 | 2.1 | 3.3 | 3.8 |
| WEST SOUTH CENTRAL: | | | | | | | | | |
| Arkansas..... | 97.3 | 96.9 | 96.7 | 1.5 | 1.5 | 1.3 | 1.2 | 1.6 | 2.0 |
| Louisiana..... | 92.1 | 89.4 | 85.0 | 5.9 | 8.2 | 12.3 | 2.0 | 2.4 | 2.7 |
| Oklahoma..... | 93.9 | 92.0 | 94.7 | 5.1 | 6.0 | 3.2 | 0.9 | 2.0 | 2.1 |
| Texas..... | 92.7 | 93.3 | 93.2 | 5.5 | 5.1 | 4.4 | 1.8 | 1.7 | 2.4 |
| MOUNTAIN: | | | | | | | | | |
| Montana..... | 98.1 | 97.7 | 98.1 | 1.6 | 1.6 | 0.9 | 0.3 | 0.7 | 1.1 |
| Idaho..... | 97.7 | 95.8 | 96.5 | 1.9 | 2.9 | 2.1 | 0.4 | 1.3 | 1.4 |
| Wyoming..... | 98.0 | 97.8 | 98.5 | 1.6 | 1.8 | 0.7 | 0.4 | 0.4 | 0.7 |
| Colorado..... | 92.0 | 92.4 | 93.4 | 7.5 | 6.2 | 5.5 | 0.6 | 1.4 | 1.0 |
| New Mexico..... | 96.4 | 97.4 | 96.5 | 2.0 | 1.5 | 2.4 | 1.6 | 1.1 | 1.0 |
| Arizona..... | 98.8 | 98.9 | 98.0 | 0.6 | 0.7 | 0.9 | 0.6 | 0.4 | 1.1 |
| Utah..... | 88.8 | 84.9 | 86.1 | 10.2 | 12.6 | 10.7 | 0.9 | 2.4 | 3.2 |
| Nevada..... | 98.4 | 98.5 | 95.4 | 1.2 | 1.0 | 1.2 | 0.4 | 0.5 | 3.4 |
| PACIFIC: | | | | | | | | | |
| Washington..... | 95.5 | 96.9 | 97.2 | 4.1 | 2.9 | 2.0 | 0.4 | 0.2 | 0.8 |
| Oregon..... | 91.8 | 90.9 | 90.4 | 7.8 | 8.0 | 7.7 | 0.3 | 1.1 | 1.9 |
| California..... | 86.9 | 84.4 | 79.7 | 12.2 | 14.0 | 17.9 | 0.9 | 1.6 | 2.4 |

In every geographic division except New England, children under 16 years of age constituted a smaller proportion of the average number of wage earners in 1909 than in 1899, while the proportion in New Eng-

land rose slightly, wholly on account of increased proportions in Massachusetts and Connecticut. The proportion of children decreased during the decade in all but five of the states, the exceptions being Massachusetts, Connecticut, Maryland (where there was very little change), Florida, and New Mexico. In the Middle Atlantic, East North Central, West North Central, East South Central, and Mountain divisions women 16 years of age or over represented a larger proportion of the total in 1909 than in 1899, but in the other divisions they constituted a somewhat smaller proportion. Most of the individual states show comparatively little change in the proportion of women, the most conspicuous increases being in certain states where the manufacturing industries are still comparatively undeveloped, such as South Dakota and Nebraska. Marked decreases in the proportion of women took place in Louisiana and California.

Wage earners employed, by months.—The following table gives the number of wage earners employed on the 15th of each month during the year 1909 for all industries combined. For purposes of comparison figures for 1904 are also given, but these are on a slightly different basis, since at that census each establishment was asked to report the average number employed for each month rather than the number employed on a specified day of each month.

Table 18

WAGE EARNERS IN ALL MANUFACTURING INDUSTRIES.¹

| MONTH. | Number. | | Per cent of maximum. | |
|----------------|-----------|-----------|----------------------|-------|
| | | | | |
| | 1909 | 1904 | 1909 | 1904 |
| January..... | 6,210,063 | 5,262,472 | 58.6 | 92.7 |
| February..... | 6,297,627 | 5,330,471 | 60.9 | 93.9 |
| March..... | 6,423,517 | 5,459,736 | 61.7 | 96.0 |
| April..... | 6,437,633 | 5,463,343 | 61.9 | 96.8 |
| May..... | 6,457,279 | 5,512,273 | 62.2 | 97.1 |
| June..... | 6,517,409 | 5,463,804 | 63.0 | 96.2 |
| July..... | 6,486,676 | 5,326,966 | 62.6 | 93.8 |
| August..... | 6,656,833 | 5,420,618 | 65.0 | 95.5 |
| September..... | 6,893,765 | 5,608,412 | 69.5 | 98.8 |
| October..... | 6,997,690 | 5,676,920 | 99.9 | 100.0 |
| November..... | 7,006,853 | 5,587,028 | 100.0 | 98.4 |
| December..... | 6,990,652 | 5,490,453 | 99.8 | 96.7 |

¹ The numbers for 1909 represent the number employed on the 15th of each month, or the nearest representative day; those for 1904, the average number employed during each month.

In 1909 the largest number of wage earners, 7,006,853, was employed in November, and the smallest number, 6,210,063, in January, this number being equal to 88.6 per cent of the maximum. In 1904 the largest number was employed in October and the smallest number in January, the minimum representing 92.7 per cent of the maximum. In 1909 a fairly constant increase in employment was shown from January to November, except that the number employed in July was a little lower than in June.

The figures for employment by months for all industries combined fail to show fully the variations in employment, since a variation in one direction in one industry may be offset by a variation in the opposite direction in another industry. Except for distinctly

seasonal industries, however, the employment in most of the important industries of the country appears to have been comparatively steady throughout the year 1909. The following table shows the amount of variation in certain industries. It gives (1) the 14 industries which reported the largest average number of wage earners, including all reporting 100,000 or more, and (2) the 12 industries which show the greatest variations in employment, including all (except one or two employing less than 1,000 wage earners each) in which the number for the month of least activity is less than one-half that for the month of greatest activity.

Table 19

| INDUSTRY. | WAGE EARNERS. | | | | | |
|---|-----------------|-----------------|---------|-----------------|---------|----------------------|
| | Average number. | Maximum number. | | Minimum number. | | |
| | | Month. | Number. | Month. | Number. | Per cent of maximum. |
| <i>Principal industries.</i> | | | | | | |
| Lumber and timber products..... | 695,019 | Nov... | 739,160 | Jan... | 649,239 | 87.8 |
| Foundry and machine-shop products..... | 531,011 | Dec... | 597,234 | Jan.... | 482,080 | 80.7 |
| Cotton goods, including cotton small wares..... | 378,880 | Dec... | 383,529 | Jan.... | 374,433 | 97.6 |
| Cars and general shop construction and repairs by steam-railroad companies..... | 282,174 | Dec... | 301,538 | May... | 268,700 | 89.1 |
| Printing and publishing..... | 258,434 | Dec... | 269,884 | July... | 251,757 | 93.3 |
| Iron and steel, steel works and rolling mills..... | 240,076 | Dec... | 283,629 | Mar... | 215,076 | 75.8 |
| Clothing, men's, including shirts..... | 239,096 | Dec... | 251,349 | Jan.... | 230,650 | 91.8 |
| Boots and shoes, including cut stock and findings..... | 198,297 | Dec... | 207,452 | May... | 190,382 | 91.8 |
| Woolen, worsted, and felt goods, and wool hats..... | 168,722 | Nov... | 173,943 | Jan.... | 158,318 | 91.0 |
| Tobacco manufactures..... | 166,810 | Dec... | 176,869 | Jan.... | 161,563 | 91.6 |
| Clothing, women's..... | 153,743 | Oct... | 167,525 | July... | 135,034 | 80.6 |
| Hosiery and knit goods..... | 129,275 | Nov... | 134,540 | Jan.... | 123,308 | 91.7 |
| Furniture and refrigerators..... | 128,452 | Nov... | 136,615 | Jan.... | 120,524 | 88.2 |
| Bread and other bakery products..... | 100,216 | Oct... | 102,770 | Jan.... | 96,639 | 94.0 |
| <i>Industries showing large variation.</i> | | | | | | |
| Brick and tile..... | 76,528 | July... | 104,930 | Jan.... | 38,312 | 36.5 |
| Canning and preserving..... | 59,998 | Sept... | 154,800 | Jan.... | 19,998 | 12.9 |
| Fertilizers..... | 18,310 | Mar... | 29,310 | July... | 14,264 | 48.7 |
| Oil, cottonseed, and cake..... | 17,071 | Nov... | 29,334 | July... | 5,174 | 17.6 |
| Ice, manufactured..... | 16,114 | July... | 22,872 | Jan.... | 9,847 | 43.1 |
| Artificial stone..... | 9,957 | Aug... | 12,884 | Jan.... | 4,856 | 37.7 |
| Hats, straw..... | 8,814 | Mar... | 11,488 | July... | 4,700 | 40.9 |
| Beet sugar..... | 7,204 | Nov... | 16,807 | Feb... | 2,206 | 13.1 |
| Sugar and molasses..... | 4,127 | Nov... | 15,761 | Feb... | 559 | 3.5 |
| Vinegar and cider..... | 1,542 | Oct... | 3,464 | Mar... | 886 | 25.6 |
| Grindstones..... | 1,394 | May... | 1,665 | Jan.... | 795 | 47.7 |
| Rice, cleaning and polishing... | 1,239 | Oct... | 2,017 | July... | 436 | 21.6 |

Considering first the principal industries, it will be seen that the greatest regularity of employment was in the manufacture of cotton goods, in which the number employed during the month of least activity, January, was equal to 97.6 per cent of the number employed in the month of greatest activity, Decem-

ber. Other industries in which the number for the month of least activity was more than 90 per cent of the number for the month of greatest activity are the manufacture of boots and shoes, bakeries, the men's clothing industry, the tobacco-products industry, the manufacture of woolen goods and of hosiery and knit goods, and printing and publishing. Among the principal industries the greatest variation appears in the steel works and rolling mills, in which the number employed during March, the month of least activity, was only 75.8 per cent of the number employed during December, the month of greatest activity. The women's clothing and foundry and machine shop industries also show a comparatively large degree of variation in the number employed.

The lumber industry, as already stated, includes logging camps as well as sawmills, and also includes planing mills and wooden packing-box factories. The variation in employment in all of these branches taken together for the country as a whole is not very great, the number employed during the month of least activity being 87.8 per cent of the number employed during the month of greatest activity. For the logging camps alone, however, there is greater variation, the number employed during July, 170,587, being only 76.6 per cent of the number employed in December, which was 222,564. Furthermore, since in different sections of the country the active season in the woods covers different months, if the operations of the logging camps in each geographic division are considered separately, a much wider variation appears in the number employed, this being particularly true in the Northern states.

There are a number of industries which are conspicuously seasonal in character. In the case of some of these the weather will not permit work except at certain seasons, and in others the raw material used is available only at certain seasons and must be handled immediately, while in the case of the remainder the demand for the products is conspicuously seasonal. The most variable large industry is canning and preserving, which naturally is confined mainly to the period at which fruits and vegetables are harvested. The industry includes the canning and preserving of fish and oysters, which is carried on in the winter months; if this were excluded there would necessarily be a much greater variation in the numbers employed. In this industry the number employed during January, the month of least activity, formed only 12.9 per cent of the number employed during September.

CHARACTER OF OWNERSHIP.

Summary for United States.—The table that follows has for its purpose the presentation of conditions in respect to the character of ownership, or legal organization, of manufacturing enterprises. Comparative figures are given, covering all industries combined, for the censuses of 1909 and 1904. Similar data for 1899 are not available.

| Table 20 CHARACTER OF OWNERSHIP. | Number of establishments. | Average number of wage earners. | Value of products. | Value added by manufacture. |
|-------------------------------------|---------------------------|---------------------------------|--------------------|-----------------------------|
| All classes: | | | | |
| 1909..... | 268,491 | 6,615,046 | \$20,672,051,870 | \$5,529,268,992 |
| 1904..... | 216,180 | 5,468,383 | 14,793,902,563 | 6,293,694,753 |
| Average per establishment— | | | | |
| 1909..... | | 25 | 76,993 | 31,767 |
| 1904..... | | 25 | 68,433 | 29,113 |
| Individual: | | | | |
| 1909..... | 140,605 | 804,883 | 2,042,061,500 | 968,824,072 |
| 1904..... | 113,946 | 755,923 | 1,702,830,624 | 824,292,887 |
| Average per establishment— | | | | |
| 1909..... | | 6 | 14,523 | 6,890 |
| 1904..... | | 7 | 14,944 | 7,234 |
| Firm: | | | | |
| 1909..... | 54,265 | 794,836 | 2,184,107,632 | 951,383,741 |
| 1904..... | 47,934 | 841,242 | 2,132,536,604 | 930,143,823 |
| Average per establishment— | | | | |
| 1909..... | | 15 | 40,249 | 17,532 |
| 1904..... | | 18 | 44,489 | 19,405 |
| Corporation: | | | | |
| 1909..... | 69,501 | 5,002,393 | 16,341,116,634 | 6,582,207,117 |
| 1904..... | 51,097 | 3,862,698 | 10,904,069,307 | 4,526,055,153 |
| Average per establishment— | | | | |
| 1909..... | | 72 | 235,121 | 94,721 |
| 1904..... | | 76 | 213,399 | 88,578 |
| Other: | | | | |
| 1909..... | 4,120 | 12,934 | 104,766,104 | 26,846,062 |
| 1904..... | 3,203 | 8,520 | 54,466,028 | 13,202,890 |
| Average per establishment— | | | | |
| 1909..... | | 3 | 25,429 | 6,516 |
| 1904..... | | 3 | 17,005 | 4,122 |
| Per cent of total— | | | | |
| 1909..... | 100.0 | 100.0 | 100.0 | 100.0 |
| 1904..... | 100.0 | 100.0 | 100.0 | 100.0 |
| Individual: | | | | |
| 1909..... | 52.4 | 12.2 | 9.9 | 11.4 |
| 1904..... | 52.7 | 13.8 | 11.5 | 13.1 |
| Firm: | | | | |
| 1909..... | 20.2 | 12.0 | 10.6 | 11.2 |
| 1904..... | 22.2 | 15.4 | 14.4 | 14.8 |
| Corporation: | | | | |
| 1909..... | 25.9 | 75.6 | 79.0 | 77.2 |
| 1904..... | 23.6 | 70.6 | 73.7 | 71.9 |
| Other: | | | | |
| 1909..... | 1.5 | 0.2 | 0.5 | 0.3 |
| 1904..... | 1.5 | 0.2 | 0.4 | 0.2 |

The most important distinction shown is that between corporate and all other forms of ownership. Of the total number of establishments reported as engaged in manufacturing industries in 1909, 25.9 per cent were under corporate ownership. The corresponding figure for 1904 was 23.6 per cent. While corporations thus controlled only about one-fourth of the total number of establishments, they gave employment to a large proportion of all wage earners reported, namely, 75.6 per cent in 1909 and 70.6 per cent in 1904. The value of the products of the factories operated by corporations represented 79 per cent of the total value of products for all establishments in 1909 and 73.7 per cent in 1904. These figures show that even during this short period of five years the corporate form of ownership increased so greatly that it represented an appreciably larger proportion of the manufacturing interests of the country in 1909 than in 1904.

Partnerships (including limited partnerships) controlled about one-fifth of the total number of manufacturing establishments in 1909, and individuals rather more than one-half of the total number. These two classes of establishments were about equal in volume of business, each reporting in the neighborhood of one-eighth of the total number of wage earners and one-tenth of the total value of products in 1909. During the five years from 1904 to 1909 partnerships lost ground, relatively, to a greater degree than individual ownership, presumably because of the incorporation of many concerns previously operated by firms.

In 1909 there were 4,120 establishments operated by cooperative companies and other miscellaneous forms of ownership that could not be classified as individual, firm, or corporate ownership. These establishments gave employment to only two-tenths of 1 per cent of the wage earners, and the value of their products was only five-tenths of 1 per cent of the total value reported for all establishments.

From 1904 to 1909 the average number of wage earners per establishment decreased for all three principal classes of ownership, while the average value of products per establishment decreased for the establishments under individual and firm ownership but increased for corporate ownership.

Proportion of business done by corporations in the principal industries: 1909 and 1904.—Table 21 on the following page shows, for the principal industries, the number of manufacturing establishments operated by corporations in 1909 and 1904, and the percentage which they represent of the entire number of establishments; also the value of the manufactured products made in establishments under corporate ownership and the percentage which this represents of the total value. The figures as to total value, on which the percentages are based, will be found in Table 110. Two important industries, the repair shops of steam railroads and the smelting and refining of copper, are not shown separately in this table, as to do so would disclose the operations of individual establishments.

This table shows that in industries where a large investment in plant and machinery is necessary to the proper conduct of the business, the establishments are as a rule operated by corporations, it being easier under this form of ownership to obtain the necessary capital. All of the establishments engaged in the smelting and refining of lead in 1909 were operated by corporations, and more than 90 per cent of the blast furnaces, steel works and rolling mills, cottonseed-oil mills, and establishments manufacturing steam-railroad cars were under this form of ownership. The general tendency has been toward an increase in the proportion of the establishments operated by corporations, and 35 of the 41 selected

industries show an increase in this respect. In 24 of the 41 selected industries, less than 50 per cent of the establishments were operated by corporations.

As a rule corporations control a much larger proportion of the output of manufactures than they do of the number of establishments. In 16 of the 41 industries the value of the products reported by corporations formed in 1909 more than 90 per cent of the value

reported for all establishments, and in all but 5 of the industries the corporations reported more than 50 per cent of the total value of products. In only 1 of the selected industries, the manufacture of women's clothing, did the proportion of the total value of products reported by corporations fall as low as one-fourth. In this industry it formed only 23.6 per cent of the total value reported for 1909.

Table 21

| INDUSTRY. | NUMBER OF ESTABLISHMENTS. | | | | | | VALUE OF PRODUCTS OF ESTABLISHMENTS OPERATED BY CORPORATIONS. | | | |
|---|---------------------------|---------|---------------------------|--------|--------------------|------|---|------------------|--------------------|-------|
| | Total. | | Operated by corporations. | | | | Amount. | | Per cent of total. | |
| | | | Number. | | Per cent of total. | | | | | |
| | | | | | | | | | | |
| 1909 | 1904 | 1909 | 1904 | 1909 | 1904 | 1909 | 1904 | 1909 | 1904 | |
| All industries | 268,491 | 216,180 | 69,501 | 51,097 | 25.9 | 23.6 | \$16,341,116,634 | \$10,904,069,307 | 79.0 | 73.7 |
| Agricultural implements..... | 640 | 648 | 340 | 327 | 54.5 | 50.5 | 140,663,575 | 105,325,880 | 96.1 | 94.0 |
| Automobiles, including bodies and parts..... | 743 | 178 | 478 | 113 | 64.3 | 63.5 | 235,802,904 | 26,454,851 | 94.6 | 88.1 |
| Boots and shoes, including out stock and findings..... | 1,918 | 1,895 | 734 | 561 | 38.3 | 29.0 | 305,710,678 | 210,493,693 | 71.3 | 58.8 |
| Brass and bronze products..... | 1,021 | 813 | 417 | 271 | 40.8 | 33.3 | 134,981,702 | 89,004,043 | 90.0 | 86.9 |
| Bread and other bakery products..... | 23,926 | 18,226 | 838 | 483 | 3.5 | 2.6 | 140,238,713 | 86,595,177 | 35.3 | 32.1 |
| Butter, cheese, and condensed milk..... | 8,479 | 8,926 | 1,313 | 1,385 | 15.5 | 15.5 | 113,493,555 | 61,309,538 | 41.3 | 36.5 |
| Canning and preserving..... | 3,767 | 3,168 | 1,167 | 940 | 31.0 | 29.7 | 116,496,003 | 78,308,836 | 74.2 | 60.0 |
| Carriages and wagons and materials..... | 5,492 | 5,588 | 884 | 806 | 16.1 | 14.4 | 109,348,007 | 96,894,926 | 68.4 | 62.2 |
| Cars, steam-railroad, not including operations of railroad companies..... | 110 | 73 | 104 | 67 | 94.5 | 91.8 | 120,486,355 | 109,079,572 | 97.4 | 98.1 |
| Chemicals..... | 349 | 275 | 266 | 207 | 70.2 | 75.3 | 115,290,377 | 65,786,129 | 98.0 | 87.5 |
| Clothing, men's, including shirts..... | 6,354 | 5,145 | 824 | 538 | 13.0 | 10.5 | 187,167,188 | ..... | 32.9 | ..... |
| Clothing, women's..... | 4,558 | 3,351 | 583 | 310 | 12.8 | 9.5 | 96,090,932 | 46,168,946 | 23.6 | 18.6 |
| Confectionery..... | 1,944 | 1,348 | 595 | 384 | 30.6 | 28.5 | 96,821,905 | 52,802,483 | 71.8 | 60.6 |
| Copper, tin, and sheet-iron products..... | 4,228 | 2,540 | 1,034 | 591 | 24.5 | 23.3 | 149,640,465 | 80,398,170 | 74.9 | 67.0 |
| Cotton goods, including cotton small wares..... | 1,324 | 1,154 | 1,113 | 922 | 84.1 | 79.9 | 598,770,236 | 417,926,307 | 95.3 | 92.8 |
| Electrical machinery, apparatus, and supplies..... | 1,009 | 784 | 720 | 524 | 71.4 | 66.8 | 213,088,053 | 133,777,389 | 96.3 | 95.0 |
| Flour-mill and gristmill products..... | 11,691 | 10,051 | 2,271 | 1,732 | 19.4 | 17.2 | 588,189,883 | 429,736,068 | 66.6 | 60.3 |
| Foundry and machine-shop products..... | 13,253 | 10,765 | 6,408 | 4,542 | 48.4 | 42.2 | 1,082,715,968 | 724,924,320 | 88.1 | 82.3 |
| Furniture and refrigerators..... | 3,155 | 2,503 | 1,499 | 1,128 | 47.5 | 43.5 | 192,097,204 | 128,051,459 | 80.1 | 72.0 |
| Gas, illuminating and heating..... | 1,296 | 1,019 | 1,091 | 931 | 84.2 | 91.4 | 105,108,539 | 123,788,392 | 99.0 | 98.9 |
| Hosiery and knit goods..... | 1,374 | 1,144 | 651 | 476 | 47.4 | 41.6 | 142,021,832 | ..... | 71.0 | ..... |
| Iron and steel, blast furnaces..... | 208 | 190 | 105 | 182 | 93.8 | 95.8 | 386,301,856 | 220,518,168 | 98.7 | 97.7 |
| Iron and steel, steel works and rolling mills..... | 446 | 415 | 424 | 385 | 95.1 | 92.8 | 980,546,017 | 666,630,620 | 99.5 | 98.9 |
| Leather goods..... | 2,375 | 1,918 | 569 | 403 | 24.0 | 21.0 | 61,527,700 | 39,869,146 | 68.8 | 48.5 |
| Leather, tanned, curried, and finished..... | 919 | 1,049 | 454 | 391 | 49.4 | 37.3 | 250,296,374 | 168,736,461 | 76.3 | 66.8 |
| Liquors, distilled..... | 613 | 805 | 229 | 178 | 37.4 | 22.1 | 180,427,167 | 110,399,668 | 88.1 | 88.7 |
| Liquors, malt..... | 1,414 | 1,530 | 906 | 930 | 70.4 | 60.8 | 338,480,960 | 203,219,137 | 90.3 | 88.2 |
| Lumber and timber products..... | 40,671 | 25,153 | 6,969 | 4,900 | 17.1 | 19.5 | 793,810,129 | 536,795,071 | 68.7 | 60.7 |
| Marble and stone work..... | 4,964 | 2,608 | 811 | 467 | 16.3 | 17.9 | 54,859,987 | ..... | 48.5 | ..... |
| Oil, cottonseed, and cake..... | 817 | 715 | 756 | 677 | 92.5 | 94.7 | 141,730,982 | 93,817,578 | 95.8 | 97.3 |
| Paint and varnish..... | 791 | 639 | 526 | 360 | 66.5 | 56.3 | 100,349,811 | 75,473,279 | 85.2 | 83.1 |
| Paper and wood pulp..... | 777 | 761 | 633 | 587 | 81.5 | 77.1 | 248,435,331 | 169,665,095 | 92.8 | 89.9 |
| Patent medicines and compounds and druggists' preparations..... | 3,642 | 2,777 | 1,610 | 1,161 | 44.2 | 41.8 | 111,493,887 | 81,831,451 | 78.5 | 69.7 |
| Petroleum, refining..... | 147 | 98 | 131 | 83 | 89.1 | 84.7 | 232,539,969 | 169,548,502 | 98.1 | 96.9 |
| Printing and publishing..... | 31,445 | 27,793 | 7,184 | 5,354 | 22.8 | 19.3 | 516,400,736 | 368,729,392 | 70.0 | 66.7 |
| Silk and silk goods, including throwsters..... | 852 | 624 | 408 | 315 | 54.9 | 50.5 | 134,495,867 | 92,403,120 | 68.3 | 69.3 |
| Slaughtering and meat packing..... | 1,641 | 1,221 | 488 | 298 | 29.7 | 24.4 | 1,215,428,015 | 793,971,346 | 88.7 | 86.1 |
| Smelting and refining, lead..... | 28 | 32 | 28 | 28 | 100.0 | 87.5 | 167,405,650 | 185,369,977 | 100.0 | 99.8 |
| Sugar and molasses, not including beet sugar..... | 233 | 344 | 114 | 112 | 48.9 | 32.6 | 255,895,127 | 223,854,504 | 91.6 | 80.7 |
| Tobacco manufactures..... | 15,822 | 16,827 | 722 | 563 | 4.6 | 3.3 | 277,102,771 | 188,186,069 | 66.5 | 56.8 |
| Woolen, worsted, and felt goods, and wool hats..... | 985 | 1,074 | 578 | 518 | 58.7 | 48.2 | 363,253,846 | 239,816,937 | 83.3 | 75.1 |
| All other industries..... | 63,070 | 49,923 | 22,277 | 15,958 | 35.3 | 32.0 | 4,425,406,903 | 3,136,410,027 | 82.8 | 83.3 |

Proportion of business done by corporations, by states: 1909 and 1904.—Table 22 shows, for the geographic divisions and for each state, the number of manufacturing establishments operated by corporations in 1909 and 1904, and the percentage which they represent of the entire number of establishments;

also the value of the manufactured products made in establishments under corporate ownership, and the percentage which this represents of the total value. The figures as to total value for each of the states, on which the percentages are based, will be found in Table 111.

Table 22

| Table 22 DIVISION AND STATE. | NUMBER OF ESTABLISHMENTS. | | | | | | VALUE OF PRODUCTS OF ESTABLISHMENTS OPERATED BY CORPORATIONS. | | | |
|-------------------------------------|---------------------------|---------|---------------------------|--------|--------------------|------|---|------------------|--------------------|------|
| | Total. | | Operated by corporations. | | | | Amount. | | Per cent of total. | |
| | | | Number. | | Per cent of total. | | | | | |
| | 1909 | 1904 | 1909 | 1904 | 1909 | 1904 | 1909 | 1904 | 1909 | 1904 |
| United States..... | 268,491 | 216,180 | 69,501 | 51,097 | 25.9 | 23.6 | \$16,341,116,634 | \$10,904,069,307 | 79.0 | 73.7 |
| GEOGRAPHIC DIVISIONS: | | | | | | | | | | |
| New England..... | 25,351 | 22,279 | 7,300 | 5,572 | 28.8 | 25.0 | 2,173,070,560 | 1,508,457,541 | 81.4 | 74.5 |
| Middle Atlantic..... | 81,315 | 67,699 | 17,785 | 12,460 | 21.9 | 18.4 | 5,133,389,739 | 3,417,242,344 | 71.9 | 65.5 |
| East North Central..... | 60,013 | 51,754 | 17,755 | 14,093 | 29.6 | 27.2 | 4,434,329,994 | 2,913,000,832 | 85.1 | 80.8 |
| West North Central..... | 27,171 | 21,492 | 6,649 | 4,816 | 24.5 | 22.4 | 1,513,583,331 | 1,044,005,587 | 83.9 | 81.3 |
| South Atlantic..... | 28,088 | 19,564 | 6,765 | 4,820 | 24.1 | 24.7 | 1,059,302,614 | 701,534,357 | 76.7 | 72.0 |
| East South Central..... | 15,381 | 10,311 | 3,558 | 2,673 | 23.1 | 25.9 | 494,623,131 | 349,227,144 | 78.5 | 75.2 |
| West South Central..... | 12,339 | 8,279 | 3,403 | 2,298 | 27.6 | 27.8 | 509,339,325 | 315,236,430 | 81.4 | 75.9 |
| Mountain..... | 5,254 | 3,610 | 1,743 | 1,114 | 33.3 | 30.9 | 328,652,051 | 230,401,412 | 90.3 | 90.5 |
| Pacific..... | 13,579 | 11,192 | 4,543 | 3,252 | 33.5 | 29.1 | 695,018,111 | 423,992,759 | 82.4 | 76.9 |
| NEW ENGLAND: | | | | | | | | | | |
| Maine..... | 3,546 | 3,145 | 861 | 671 | 24.3 | 21.3 | 136,156,275 | 101,575,154 | 77.3 | 79.5 |
| New Hampshire..... | 1,961 | 1,618 | 424 | 338 | 21.6 | 20.9 | 126,642,602 | 88,159,093 | 76.9 | 71.3 |
| Vermont..... | 1,958 | 1,699 | 372 | 309 | 19.0 | 18.2 | 42,641,046 | 36,373,592 | 82.4 | 87.7 |
| Massachusetts..... | 11,684 | 10,723 | 3,483 | 2,555 | 29.8 | 23.8 | 1,182,935,632 | 810,543,002 | 79.4 | 72.1 |
| Rhode Island..... | 1,951 | 1,617 | 659 | 512 | 33.8 | 31.7 | 243,426,998 | 158,322,691 | 86.8 | 78.3 |
| Connecticut..... | 4,251 | 3,477 | 1,501 | 1,187 | 35.3 | 34.1 | 441,267,987 | 314,484,099 | 90.0 | 85.2 |
| MIDDLE ATLANTIC: | | | | | | | | | | |
| New York..... | 44,935 | 37,194 | 9,345 | 6,086 | 20.8 | 16.4 | 2,108,026,670 | 1,396,924,211 | 62.6 | 56.1 |
| New Jersey..... | 8,817 | 7,010 | 2,560 | 1,834 | 29.0 | 26.2 | 971,994,531 | 617,236,276 | 84.8 | 79.7 |
| Pennsylvania..... | 27,563 | 23,495 | 5,880 | 4,540 | 21.3 | 19.3 | 2,653,458,538 | 1,493,081,857 | 78.2 | 71.7 |
| EAST NORTH CENTRAL: | | | | | | | | | | |
| Ohio..... | 15,138 | 13,785 | 5,123 | 4,008 | 33.8 | 29.1 | 1,249,778,444 | 777,302,416 | 86.9 | 80.9 |
| Indiana..... | 7,969 | 7,044 | 2,363 | 1,915 | 29.7 | 27.2 | 495,570,090 | 317,481,228 | 85.6 | 80.6 |
| Illinois..... | 18,026 | 14,921 | 5,209 | 4,145 | 28.9 | 27.8 | 1,646,518,916 | 1,179,028,340 | 85.8 | 83.6 |
| Michigan..... | 9,159 | 7,446 | 2,638 | 2,044 | 28.8 | 27.4 | 571,102,107 | 328,185,756 | 83.4 | 76.5 |
| Wisconsin..... | 9,721 | 8,558 | 2,422 | 1,981 | 24.9 | 23.1 | 471,860,437 | 310,912,592 | 79.8 | 75.6 |
| WEST NORTH CENTRAL: | | | | | | | | | | |
| Minnesota..... | 5,561 | 4,756 | 1,326 | 922 | 23.8 | 19.4 | 330,924,567 | 234,613,794 | 80.8 | 76.0 |
| Iowa..... | 5,528 | 4,785 | 1,317 | 1,041 | 23.8 | 21.8 | 189,182,389 | 116,246,585 | 73.0 | 72.4 |
| Missouri..... | 8,375 | 6,464 | 2,447 | 1,847 | 29.2 | 28.6 | 508,761,173 | 379,406,290 | 88.6 | 86.3 |
| North Dakota..... | 752 | 507 | 133 | 81 | 17.7 | 16.0 | 13,586,608 | 5,146,817 | 71.0 | 59.4 |
| South Dakota..... | 1,020 | 886 | 216 | 112 | 21.2 | 16.3 | 9,870,131 | 6,000,547 | 55.2 | 45.9 |
| Nebraska..... | 2,500 | 1,819 | 487 | 359 | 19.5 | 19.7 | 175,621,402 | 128,623,975 | 88.2 | 89.5 |
| Kansas..... | 3,435 | 2,475 | 723 | 454 | 21.0 | 18.3 | 285,637,061 | 164,565,576 | 87.9 | 83.0 |
| SOUTH ATLANTIC: | | | | | | | | | | |
| Delaware..... | 726 | 631 | 202 | 160 | 27.8 | 25.0 | 36,071,988 | 128,921,912 | 68.3 | 79.3 |
| Maryland..... | 4,837 | 3,852 | 873 | 650 | 18.0 | 16.9 | 207,102,289 | 147,744,248 | 65.6 | 69.7 |
| District of Columbia..... | 518 | 482 | 122 | 91 | 23.6 | 18.9 | 16,544,835 | 10,150,928 | 65.4 | 55.3 |
| Virginia..... | 5,685 | 3,187 | 1,099 | 702 | 19.3 | 22.0 | 163,780,071 | 109,546,390 | 74.5 | 73.6 |
| West Virginia..... | 2,586 | 2,109 | 813 | 638 | 31.4 | 30.3 | 140,385,264 | 78,951,053 | 86.7 | 79.7 |
| North Carolina..... | 4,931 | 3,272 | 1,339 | 879 | 27.2 | 26.9 | 182,140,064 | 113,510,110 | 84.1 | 79.6 |
| South Carolina..... | 1,854 | 1,399 | 564 | 464 | 30.4 | 33.2 | 102,403,671 | 70,493,378 | 90.4 | 88.8 |
| Georgia..... | 4,792 | 3,219 | 1,252 | 931 | 26.1 | 28.9 | 165,067,980 | 114,976,572 | 81.4 | 76.1 |
| Florida..... | 2,159 | 1,413 | 501 | 308 | 23.2 | 21.7 | 45,815,852 | 127,239,766 | 62.9 | 54.2 |
| EAST SOUTH CENTRAL: | | | | | | | | | | |
| Kentucky..... | 4,776 | 3,734 | 1,147 | 882 | 24.0 | 23.1 | 178,650,245 | 117,046,726 | 79.8 | 73.3 |
| Tennessee..... | 4,609 | 3,175 | 1,068 | 785 | 23.2 | 24.7 | 133,750,538 | 97,265,799 | 74.2 | 70.5 |
| Alabama..... | 3,398 | 1,882 | 788 | 578 | 23.2 | 30.7 | 123,502,394 | 92,725,327 | 84.6 | 84.9 |
| Mississippi..... | 2,598 | 1,520 | 555 | 447 | 21.4 | 29.4 | 58,719,954 | 42,169,292 | 72.9 | 73.4 |
| WEST SOUTH CENTRAL: | | | | | | | | | | |
| Arkansas..... | 2,925 | 1,907 | 640 | 518 | 21.9 | 27.2 | 55,585,992 | 38,724,917 | 74.2 | 71.9 |
| Louisiana..... | 2,516 | 2,091 | 910 | 700 | 36.2 | 33.5 | 183,303,633 | 138,977,223 | 81.8 | 74.6 |
| Oklahoma..... | 2,310 | 1,123 | 501 | 242 | 21.7 | 21.5 | 39,390,339 | 17,401,144 | 73.4 | 71.1 |
| Texas..... | 4,588 | 3,158 | 1,352 | 839 | 29.5 | 26.6 | 231,059,361 | 120,133,146 | 84.7 | 79.8 |
| MOUNTAIN: | | | | | | | | | | |
| Montana..... | 677 | 382 | 203 | 118 | 30.0 | 30.9 | 68,458,197 | 63,369,703 | 93.4 | 95.4 |
| Idaho..... | 725 | 364 | 200 | 105 | 27.6 | 28.8 | 16,982,094 | 6,136,137 | 75.8 | 70.0 |
| Wyoming..... | 268 | 169 | 168 | 155 | 25.0 | 32.0 | 14,664,800 | 2,751,355 | 74.6 | 78.1 |
| Colorado..... | 2,034 | 1,006 | 668 | 478 | 34.3 | 29.8 | 116,991,543 | 89,377,091 | 90.0 | 89.2 |
| New Mexico..... | 313 | 199 | 196 | 153 | 30.4 | 25.6 | 16,253,689 | 4,645,600 | 79.2 | 81.4 |
| Arizona..... | 311 | 169 | 122 | 71 | 38.6 | 42.0 | 148,305,675 | 27,135,784 | 96.1 | 96.6 |
| Utah..... | 749 | 606 | 294 | 203 | 39.3 | 33.5 | 56,234,329 | 34,765,530 | 90.7 | 89.7 |
| Nevada..... | 177 | 115 | 170 | 34 | 37.3 | 29.6 | 110,761,784 | 2,229,209 | 90.5 | 71.7 |
| PACIFIC: | | | | | | | | | | |
| Washington..... | 3,674 | 2,751 | 1,444 | 926 | 39.3 | 33.7 | 185,171,875 | 103,215,882 | 83.9 | 80.1 |
| Oregon..... | 2,246 | 1,602 | 640 | 409 | 28.5 | 25.5 | 70,781,269 | 40,004,288 | 76.1 | 72.1 |
| California..... | 7,659 | 6,839 | 2,459 | 1,917 | 32.1 | 28.0 | 439,064,967 | 280,742,580 | 82.9 | 76.5 |

¹ Includes establishments operated under other forms of ownership, to avoid disclosing individual operations. There were eight of these establishments in 1909 and seven in 1904 which were included in the total for geographic divisions but are not included in the total for the United States.

Table 22 shows that in most of the states in 1909 the number of manufacturing establishments owned by corporations represented between one-fifth and one-third of the total number of manufacturing establishments. Vermont, North Dakota, Nebraska, Maryland, and Virginia were the only states in which less than one-fifth of the establishments were owned by corporations, and Rhode Island, Connecticut, Ohio, Louisiana, and five states in the western part of the country were the only ones in which over one-third were under this form of ownership. In a large majority of the states the proportion of establishments operated by corporations was larger in 1909 than in 1904, the exceptions being Nebraska, Virginia, South Carolina, Georgia, Tennessee, Alabama, Mississippi, Arkansas, Montana, Idaho, Wyoming, and Arizona.

In most of the states between three-fifths and nine-tenths of the total value of manufactured products in 1909 was reported by establishments under corporate

ownership. The only state in which the proportion was less than three-fifths was South Dakota, while in Connecticut, South Carolina, Montana, Colorado, Arizona, Utah, and Nevada the proportion was nine-tenths or more. Among the great manufacturing states, New York is conspicuous for the comparatively small proportion, 62.6 per cent, of the value of its products contributed by this class of establishments. In almost every state a larger percentage of the total value of products was reported by such establishments in 1909 than in 1904, thus indicating that the tendency toward the incorporation of manufacturing concerns, particularly the larger concerns, is general and to a considerable degree independent of variations in state legislation regarding corporations. The only states in which the proportion of the total value produced by corporations was less in 1909 than in 1904 are Nebraska, Delaware, Alabama, Mississippi, Montana, Wyoming, New Mexico, and Arizona, and the difference in each case was slight.

SIZE OF ESTABLISHMENTS.

Summary for United States.—The tendency for manufacturing to become concentrated in large establishments, or the reverse, is a matter of interest from the standpoint of industrial organization. In order to throw some light upon it, Table 23 groups the establishments in all industries combined according to the value of their products, and shows for each group, for 1909 and 1904, the number of wage earners, value of products, and value added by manufacture, together with the percentage of the respective totals represented by each group. It also gives the average size of establishments as measured by these three items; the changes in this average are, however, much less significant than the changes in the percentages for the several groups.

Of the 268,491 establishments reported as engaged in manufacturing industries in 1909, there were 3,060, or 1.1 per cent, whose products were valued at more than \$1,000,000 each. The corresponding figures for 1904 were 1,900 establishments out of 216,180, or nine-tenths of 1 per cent. While these establishments represented a comparatively small proportion of the total number of establishments, they gave employment to a much larger proportion of all the wage earners reported, namely, 30.5 per cent in 1909 and 25.6 per cent in 1904. The value of products of such establishments represented 43.8 per cent of the total value of products in 1909 and 38 per cent in 1904.

The figures indicate that establishments of this class produced a considerably larger proportion of the manufactures of the country in 1909 than in 1904. It should be noted that the increased proportion is due partly to the fact that certain establishments included in the other groups in 1904 were included in this group in 1909 as the result of an increase in the value of their output.

Table 23

| VALUE OF PRODUCTS. | Number of establishments. | Average number of wage earners. | Value of products. | Value added by manufacture. |
|---|---------------------------|---------------------------------|--------------------|-----------------------------|
| All classes: | | | | |
| 1909 | 268,491 | 6,615,046 | \$20,672,051,870 | \$8,529,280,992 |
| 1904 | 216,180 | 5,468,383 | 14,793,902,663 | 6,289,694,753 |
| Less than \$5,000: | | | | |
| 1909 | 93,349 | 142,430 | 222,463,847 | 144,246,008 |
| 1904 | 71,147 | 106,363 | 176,128,212 | 114,781,124 |
| \$5,000 and less than \$20,000: | | | | |
| 1909 | 86,088 | 470,006 | 904,645,604 | 509,907,934 |
| 1904 | 72,701 | 419,406 | 751,047,759 | 424,129,643 |
| \$20,000 and less than \$100,000: | | | | |
| 1909 | 57,270 | 1,090,449 | 2,544,426,711 | 1,258,317,991 |
| 1904 | 48,096 | 1,027,047 | 2,129,257,883 | 1,090,271,887 |
| \$100,000 and less than \$1,000,000: | | | | |
| 1909 | 27,824 | 2,896,532 | 7,946,935,255 | 3,572,746,038 |
| 1904 | 22,246 | 2,515,004 | 6,109,012,538 | 2,782,641,833 |
| \$1,000,000 and over: | | | | |
| 1909 | 3,060 | 2,015,029 | 9,053,580,393 | 3,044,043,021 |
| 1904 | 1,900 | 1,400,453 | 5,628,456,171 | 1,881,870,216 |
| Per cent of total: | | | | |
| 1909 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1904 | 100.0 | 100.0 | 100.0 | 100.0 |
| Less than \$5,000: | | | | |
| 1909 | 34.8 | 2.2 | 1.1 | 1.7 |
| 1904 | 32.9 | 1.9 | 1.2 | 1.8 |
| \$5,000 and less than \$20,000: | | | | |
| 1909 | 32.4 | 7.1 | 4.4 | 6.0 |
| 1904 | 33.7 | 7.7 | 5.1 | 6.7 |
| \$20,000 and less than \$100,000: | | | | |
| 1909 | 21.3 | 16.5 | 12.3 | 14.8 |
| 1904 | 22.2 | 18.8 | 14.4 | 17.3 |
| \$100,000 and less than \$1,000,000: | | | | |
| 1909 | 10.4 | 43.8 | 38.4 | 41.9 |
| 1904 | 10.3 | 46.0 | 41.3 | 44.2 |
| \$1,000,000 and over: | | | | |
| 1909 | 1.1 | 30.5 | 43.8 | 35.7 |
| 1904 | 0.9 | 25.6 | 38.0 | 29.9 |
| Average per establishment: | | | | |
| 1909 | | 25 | \$76,993 | \$31,767 |
| 1904 | | 25 | 68,433 | 29,113 |

In 1909 establishments with a product valued between \$100,000 and \$1,000,000, gave employment to 43.8 per cent of the wage earners, and the value of their products formed 38.4 per cent of the total. Establishments with a product valued between \$20,000 and \$100,000 gave employment to about one-sixth of the wage earners, and the value of their products formed about one-eighth of the total. The establishments which

had a product valued between \$5,000 and \$20,000, constituted about one-third of the whole number, but gave employment to only 7.1 per cent of the wage earners, and the value of their products formed only 4.4 per cent of the total. Establishments that had a product in 1909 valued at less than \$5,000 also formed about one-third of the total number, but they gave employment to only 2.2 per cent of the wage earners and turned out products whose value amounted to only 1.1 per cent of the total. In this class of establishments a large proportion of the work was done by the proprietors and firm members.

Of the five classes designated, the class of establishments with products valued at \$1,000,000 or over is the only one that reported a larger proportion of the total value of products in 1909 than in 1904, every other class having lost relatively. The same statement is true as to the number of wage earners, except that the establishments of smallest size, as well as those of largest size, have gained somewhat in their proportion of the total number employed.

During the five years 1904-1909 the average value of products per establishment increased from \$68,433 to \$76,993, and the average value added by manufacture from \$29,113 to \$31,767. These changes can scarcely be taken as in themselves indicating a tendency toward concentration, as the increased values shown are due in part to the increase that has taken place in the prices of commodities. The average number of wage earners per establishment was the same at the two censuses, namely, 25.

Relative importance of large establishments in the principal industries: 1909 and 1904.—The following table shows for the principal industries of the United States, for 1909 and 1904, the number of establishments manufacturing products to the value of \$1,000,000 or more, and the percentage which such establishments represent of the total number of establishments; also the value of products made by establishments of this class and the proportion which that value represents of the total for all establishments in the industry.

Table 24

| INDUSTRY. | NUMBER OF ESTABLISHMENTS. | | | | | | VALUE OF PRODUCTS OF ESTABLISHMENTS REPORTING PRODUCTS VALUED AT \$1,000,000 OR OVER. | | | |
|---|---------------------------|---------|---|-------|--------------------|-------|---|-----------------|--------------------|-------|
| | Total. | | Reporting products valued at \$1,000,000 or over. | | | | Amount. | | Per cent of total. | |
| | | | Number. | | Per cent of total. | | | | | |
| | 1909 | 1904 | 1909 | 1904 | 1909 | 1904 | 1909 | 1904 | 1909 | 1904 |
| | | | | | | | | | | |
| All industries..... | 268,491 | 216,180 | 3,060 | 1,900 | 1.1 | 0.9 | \$9,053,580,393 | \$5,628,456,171 | 43.8 | 28.0 |
| Agricultural implements..... | 640 | 648 | 34 | 27 | 5.3 | 4.2 | 94,138,206 | 58,479,820 | 64.3 | 52.2 |
| Automobiles, including bodies and parts..... | 743 | 178 | 56 | 10 | 7.5 | 5.6 | 170,388,862 | 13,995,669 | 68.4 | 46.6 |
| Boots and shoes, including cut stock and findings..... | 1,918 | 1,895 | 135 | 162 | 7.0 | 3.3 | 244,547,642 | 119,079,802 | 47.7 | 35.3 |
| Brass and bronze products..... | 1,021 | 813 | 24 | 17 | 2.4 | 2.1 | 85,947,143 | 51,736,503 | 57.3 | 50.5 |
| Bread and other bakery products..... | 23,926 | 18,226 | 21 | 14 | 0.1 | 0.1 | 36,385,586 | 23,083,467 | 9.2 | 8.6 |
| Butter, cheese, and condensed milk..... | 8,479 | 8,926 | 9 | (1) | 0.1 | ..... | 11,933,553 | (1) | 4.3 | ..... |
| Canning and preserving..... | 3,767 | 3,168 | 13 | 4 | 0.3 | 0.1 | 23,468,494 | 5,627,911 | 14.9 | 4.3 |
| Carriages and wagons and materials..... | 5,492 | 5,588 | 13 | 8 | 0.2 | 0.1 | 23,626,135 | 13,957,216 | 15.0 | 9.0 |
| Cars and general shop construction and repairs by steam-railroad companies..... | 1,145 | 1,140 | 94 | 68 | 8.2 | 6.0 | 189,111,816 | 125,671,900 | 46.6 | 40.6 |
| Cars, steam-railroad, not including operations of railroad companies..... | 110 | 73 | 25 | 25 | 22.7 | 34.2 | 99,841,717 | 98,706,346 | 80.7 | 88.8 |
| Chemicals..... | 349 | 275 | 31 | 18 | 8.9 | 6.5 | 70,806,560 | 36,296,917 | 60.2 | 48.3 |
| Clothing, men's, including shirts..... | 6,254 | 5,145 | 84 | 58 | 1.3 | 1.1 | 167,971,252 | 101,380,521 | 29.6 | 24.9 |
| Clothing, women's..... | 4,558 | 3,351 | 22 | 11 | 0.5 | 0.3 | 30,612,144 | 14,037,712 | 8.0 | 5.7 |
| Confectionery..... | 1,944 | 1,348 | 12 | 5 | 0.6 | 0.4 | 18,998,220 | 7,733,842 | 14.1 | 8.9 |
| Copper, tin, and sheet-iron products..... | 4,228 | 2,540 | 27 | 15 | 0.6 | 0.6 | 44,988,549 | 25,257,976 | 22.5 | 21.1 |
| Cotton goods, including cotton small wares..... | 1,324 | 1,154 | 163 | 99 | 12.3 | 8.6 | 332,345,643 | 197,884,132 | 52.9 | 43.9 |
| Electrical machinery, apparatus, and supplies..... | 1,009 | 784 | 31 | 22 | 3.1 | 2.8 | 126,375,240 | 85,154,294 | 57.1 | 60.5 |
| Flour-mill and gristmill products..... | 11,691 | 10,051 | 138 | 87 | 1.2 | 0.9 | 319,047,659 | 202,952,454 | 36.1 | 28.5 |
| Foundry and machine-shop products..... | 13,253 | 10,765 | 180 | 111 | 1.4 | 1.0 | 356,615,899 | 193,749,471 | 29.0 | 22.0 |
| Furniture and refrigerators..... | 3,155 | 2,593 | 11 | 8 | 0.3 | 0.3 | 20,070,913 | 12,523,557 | 8.4 | 7.0 |
| Gas, illuminating and heating..... | 1,296 | 1,019 | 28 | 24 | 2.2 | 2.4 | 96,395,457 | 73,898,211 | 57.8 | 59.0 |
| Hosiery and knit goods..... | 1,374 | 1,144 | 25 | 11 | 1.8 | 1.0 | 37,125,559 | 15,018,710 | 18.5 | 11.0 |
| Iron and steel, blast furnaces..... | 208 | 190 | 86 | 49 | 41.3 | 25.8 | 335,922,323 | 173,321,243 | 85.8 | 74.8 |
| Iron and steel, steel works and rolling mills..... | 446 | 415 | 186 | 131 | 41.7 | 31.6 | 896,764,329 | 579,175,787 | 91.0 | 84.6 |
| Leather, tanned, curried, and finished..... | 919 | 1,049 | 78 | 48 | 8.5 | 4.6 | 157,911,458 | 91,557,225 | 48.2 | 36.2 |
| Liquors, distilled..... | 613 | 805 | 39 | 22 | 6.4 | 2.7 | 148,423,755 | 101,537,912 | 72.5 | 77.4 |
| Liquors, malt..... | 1,414 | 1,530 | 67 | 46 | 4.7 | 3.0 | 138,096,247 | 84,969,197 | 36.8 | 28.2 |
| Lumber and timber products..... | 40,671 | 25,153 | 72 | 26 | 0.2 | 0.1 | 103,756,419 | 35,550,194 | 9.0 | 4.9 |
| Oil, cottonseed, and cake..... | 817 | 715 | 17 | 9 | 2.1 | 1.3 | 35,974,829 | 21,351,063 | 24.3 | 22.1 |
| Paint and varnish..... | 791 | 639 | 26 | 16 | 3.3 | 2.5 | 44,169,139 | 29,873,086 | 35.3 | 32.9 |
| Paper and wood pulp..... | 777 | 761 | 50 | 30 | 6.4 | 3.9 | 93,380,298 | 47,301,705 | 35.0 | 25.1 |
| Patent medicines and compounds and druggists' preparations..... | 3,642 | 2,777 | 19 | 14 | 0.5 | 0.5 | 33,632,561 | 26,851,722 | 23.7 | 22.9 |
| Petroleum, refining..... | 147 | 98 | 35 | 19 | 23.8 | 19.4 | 208,671,648 | 154,549,455 | 88.0 | 88.3 |
| Printing and publishing..... | 31,445 | 27,793 | 74 | 43 | 0.2 | 0.2 | 137,082,261 | 82,419,052 | 18.6 | 14.9 |
| Silk and silk goods, including throwsters..... | 852 | 624 | 37 | 23 | 4.3 | 3.7 | 68,579,806 | 39,778,944 | 34.8 | 29.8 |
| Slaughtering and meat packing..... | 1,641 | 1,221 | 166 | 110 | 10.1 | 9.0 | 1,176,461,413 | 773,222,635 | 85.8 | 83.9 |
| Smelting and refining, copper..... | 33 | 40 | 32 | 31 | 84.2 | 77.5 | 375,135,093 | 238,328,190 | 99.0 | 99.0 |
| Smelting and refining, lead..... | 28 | 32 | 21 | 18 | 75.0 | 56.2 | 166,045,144 | 181,611,667 | 99.2 | 97.4 |
| Tobacco manufactures..... | 15,822 | 16,827 | 64 | 43 | 0.4 | 0.3 | 263,894,122 | 123,000,821 | 48.9 | 37.1 |
| Woolen, worsted, and felt goods, and wool hats..... | 955 | 1,074 | 86 | 63 | 8.7 | 5.9 | 248,343,965 | 155,993,851 | 57.0 | 42.6 |
| All other industries..... | 69,459 | 53,613 | 729 | 455 | 1.0 | 0.8 | 1,880,724,222 | 1,242,356,558 | 37.2 | 33.9 |

¹ The statistics for three establishments omitted, to avoid the disclosure of individual operations.
² The statistics for two establishments omitted, to avoid the disclosure of individual operations.
³ The statistics for one establishment omitted, to avoid the disclosure of individual operations.

The total value of products for each industry as a whole, from which the percentages in the last two columns are calculated, appears in Table 110. Three important industries, the manufacture of leather goods, marble and stone work, and sugar and molasses, are not shown in the table in order to avoid the disclosure of individual operations.

While the gross value of products is in some respects not the best criterion of the relative importance of different industries or of different states or sections in respect to manufacturing business, it is a fairly satisfactory standard for comparing different classes of establishments within the same industry. Table 24 shows, as might be expected, exceedingly wide variation among the different industries in respect to the proportion of large establishments, and in respect to the proportion of the total value of products which is reported by such establishments. The industry in which establishments reporting products to the value of \$1,000,000 or more constitute the largest proportion of the total number of establishments is the smelting and refining of copper, followed, in order, by the smelting and refining of lead, steel works and rolling mills, blast furnaces, the refining of petroleum, and the construction of steam-railroad cars. In each of these industries in 1909 establishments of this class constituted more than one-fifth of the total number, and in the smelting and refining of copper they constituted about five-sixths of the total. In these industries, moreover, establishments of this size reported exceptionally high proportions of the total value of products. The smelting and refining of lead and of copper ranked highest in this respect, with 99.2 and 99 per cent, respectively, of the total value of products reported by establishments with a value of products above \$1,000,000. The slaughtering and meat-packing industry, also, though its proportion of large establishments is not conspicuously high, shows a very high proportion of the total value of products, 85.8 per cent, reported from such establishments.

On the other hand, there are a number of industries in which the smaller establishments predominate and in which only a very small proportion of the total value of products is contributed by establishments manufacturing products to the value of \$1,000,000 or more. In the bakery, butter, cheese, and condensed-milk, women's clothing, furniture, and lumber industries the proportion of the total value of products reported by such establishments is less than 10 per cent, and there are several other industries of importance in which the proportion is less than 20 per cent.

In practically every industry named in the table the number of establishments manufacturing products to the value of \$1,000,000 or more increased materially

from 1904 to 1909, and constituted a larger proportion of the total number of establishments in the later year than in the earlier. In the same way the value of the products of such establishments in nearly every industry constituted a larger proportion of the total value in 1909 than in 1904, the only exceptions being in the manufacture of electrical machinery, apparatus, and supplies, the construction of railroad cars, the illuminating-gas industry, the distillery industry, and the refining of petroleum.

Relative importance of large establishments, by states: 1909 and 1904.—Table 25 presents, by states grouped according to geographic divisions, statistics showing the relative importance of the establishments having a product valued at \$1,000,000 or over for the census years 1909 and 1904. Certain states are not shown separately, as to do so would disclose individual operations.

The differences among the several states with respect to the extent to which manufacturing is carried on in large establishments are dependent in part upon the character of the industries predominant in each state. It also depends in part upon the degree to which those industries have been developed; in those states in which manufactures are extensive the large establishments are likely, other conditions being equal, to do a greater proportion of the manufacturing than in states where manufactures are relatively unimportant.

The state in which establishments manufacturing products to the value of \$1,000,000 or more represented the largest proportion of the total number of establishments in 1909 was Rhode Island, with 3.5 per cent, followed by Arizona and Massachusetts, in the order named. The proportion in New York, the leading manufacturing state, was comparatively low, 1 per cent. There are several states in which such establishments represented only a small fraction of 1 per cent of the total number.

In most of the states the large establishments contributed a very considerable proportion of the entire value of manufactured products. The state in which this proportion was the highest in 1909 is Arizona, with 84.1 per cent, followed by Nebraska, Montana, Kansas, New Jersey, Illinois, Utah, and Pennsylvania, in each of which states the products of establishments of this class represented more than one-half of the total value. The predominance of the smelting and refining of copper and lead in the Mountain states named, of the slaughtering and meat-packing industry in Kansas and Nebraska, of the slaughtering and the iron and steel industries in Illinois, of the iron and steel industry in Pennsylvania, and of the smelting and refining of copper and the refining of petroleum in New Jersey serve in a large measure to explain these high

percentages. In New York, the most important manufacturing state, 37 per cent of the total value of products was reported by establishments of the class under consideration, this comparatively low percentage being the result in part of the great magnitude in that state

of the clothing industries, which are mostly conducted in small establishments. Of the states given in the table those in which the proportion of the total value of products reported by large establishments is less than 10 per cent are Oklahoma, Arkansas, and Florida.

Table 25

| STATE. | NUMBER OF ESTABLISHMENTS. | | | | | | VALUE OF PRODUCTS OF ESTABLISHMENTS REPORTING PRODUCTS VALUED AT \$1,000,000 OR OVER. | | | |
|---------------------------|---------------------------|---------|---|-------|--------------------|------|---|-----------------|--------------------|------|
| | Total. | | Reporting products valued at \$1,000,000 or over. | | | | Amount. | | Per cent of total. | |
| | | | Number. | | Per cent of total. | | | | | |
| | | | | | | | | | | |
| 1909 | 1904 | 1909 | 1904 | 1909 | 1904 | 1909 | 1904 | 1909 | 1904 | |
| United States..... | 268,491 | 218,180 | 3,060 | 1,900 | 1.1 | 0.9 | \$9,053,580,393 | \$5,623,456,171 | 43.3 | 33.0 |
| NEW ENGLAND: | | | | | | | | | | |
| Maine..... | 3,546 | 3,145 | 25 | 17 | 0.7 | 0.5 | 57,250,905 | 32,815,822 | 32.5 | 22.8 |
| New Hampshire..... | 1,961 | 1,618 | 34 | 20 | 1.7 | 1.2 | 80,784,016 | 45,369,594 | 49.1 | 36.7 |
| Vermont..... | 1,958 | 1,699 | 4 | 6 | 0.2 | 0.4 | 7,195,281 | 8,475,050 | 19.5 | 13.4 |
| Massachusetts..... | 11,684 | 10,723 | 293 | 191 | 2.5 | 1.8 | 719,811,362 | 458,142,611 | 48.3 | 40.8 |
| Rhode Island..... | 1,951 | 1,617 | 69 | 41 | 3.5 | 2.5 | 135,285,205 | 80,055,916 | 48.3 | 39.6 |
| Connecticut..... | 4,251 | 3,477 | 93 | 65 | 2.2 | 1.9 | 241,562,058 | 157,691,418 | 49.3 | 42.7 |
| MIDDLE ATLANTIC: | | | | | | | | | | |
| New York..... | 44,935 | 37,194 | 470 | 294 | 1.0 | 0.8 | 1,245,968,072 | 816,099,837 | 37.0 | 32.8 |
| New Jersey..... | 8,817 | 7,010 | 194 | 121 | 2.2 | 1.7 | 649,848,742 | 384,853,547 | 56.7 | 49.7 |
| Pennsylvania..... | 27,563 | 23,495 | 400 | 284 | 1.5 | 1.2 | 1,331,111,312 | 901,539,525 | 50.7 | 46.1 |
| EAST NORTH CENTRAL: | | | | | | | | | | |
| Ohio..... | 15,138 | 13,785 | 245 | 136 | 1.6 | 1.0 | 666,243,771 | 331,726,477 | 46.3 | 34.5 |
| Indiana..... | 7,969 | 7,044 | 92 | 45 | 1.2 | 0.6 | 272,679,094 | 134,974,371 | 47.1 | 34.3 |
| Illinois..... | 18,026 | 14,921 | 273 | 168 | 1.5 | 1.1 | 1,078,746,101 | 755,157,389 | 56.2 | 53.5 |
| Michigan..... | 9,159 | 7,446 | 88 | 41 | 1.0 | 0.6 | 258,341,090 | 100,138,469 | 37.7 | 23.3 |
| Wisconsin..... | 9,721 | 8,558 | 86 | 58 | 0.9 | 0.7 | 228,084,707 | 124,948,292 | 38.6 | 30.4 |
| WEST NORTH CENTRAL: | | | | | | | | | | |
| Minnesota..... | 5,561 | 4,756 | 65 | 39 | 1.2 | 0.8 | 198,507,729 | 132,541,419 | 48.5 | 43.1 |
| Iowa..... | 5,528 | 4,785 | 29 | 11 | 0.5 | 0.2 | 95,565,315 | 41,699,284 | 28.9 | 25.6 |
| Missouri..... | 8,375 | 6,464 | 94 | 68 | 1.1 | 1.1 | 271,995,990 | 199,336,754 | 47.5 | 43.1 |
| Nebraska..... | 2,500 | 1,819 | 17 | 9 | 0.7 | 0.5 | 137,133,162 | 119,013,438 | 68.9 | 71.9 |
| Kansas..... | 3,435 | 2,475 | 34 | 21 | 1.0 | 0.8 | 204,385,280 | 114,177,287 | 62.9 | 57.6 |
| SOUTH ATLANTIC: | | | | | | | | | | |
| Delaware..... | 726 | 631 | 7 | 9 | 1.0 | 1.4 | 16,892,803 | 13,711,604 | 32.0 | 33.3 |
| Maryland..... | 4,837 | 3,852 | 41 | 34 | 0.8 | 0.9 | 124,586,041 | 95,606,542 | 39.5 | 39.3 |
| District of Columbia..... | 518 | 482 | 3 | (1) | 0.6 | 0.5 | 5,012,734 | (1) | 19.8 | ... |
| Virginia..... | 5,685 | 3,187 | 26 | 15 | 0.5 | 0.5 | 59,124,982 | 34,071,439 | 29.9 | 22.9 |
| West Virginia..... | 2,586 | 2,109 | 33 | 14 | 1.3 | 0.7 | 62,481,895 | 25,154,989 | 28.6 | 25.4 |
| North Carolina..... | 4,931 | 3,272 | 22 | 9 | 0.4 | 0.3 | 58,668,316 | 30,411,650 | 27.1 | 21.3 |
| South Carolina..... | 1,854 | 1,399 | 17 | 13 | 0.9 | 0.9 | 24,887,694 | 17,817,606 | 22.0 | 22.4 |
| Georgia..... | 4,792 | 3,219 | 18 | 10 | 0.4 | 0.3 | 24,064,085 | 20,664,194 | 18.5 | 13.7 |
| Florida..... | 2,159 | 1,413 | 4 | ... | 0.2 | ... | 4,456,669 | ... | 6.1 | ... |
| EAST SOUTH CENTRAL: | | | | | | | | | | |
| Kentucky..... | 4,776 | 3,734 | 29 | 17 | 0.6 | 0.5 | 62,164,920 | 38,590,336 | 27.8 | 24.2 |
| Tennessee..... | 4,609 | 3,175 | 17 | 11 | 0.4 | 0.3 | 30,567,045 | 18,796,261 | 17.0 | 13.6 |
| Alabama..... | 3,393 | 1,882 | 22 | 14 | 0.6 | 0.7 | 42,045,999 | 25,070,580 | 28.8 | 23.0 |
| WEST SOUTH CENTRAL: | | | | | | | | | | |
| Arkansas..... | 2,925 | 1,907 | 4 | (1) | 0.1 | ... | 5,443,573 | (1) | 7.3 | ... |
| Louisiana..... | 2,516 | 2,091 | 23 | 13 | 0.9 | 0.6 | 75,417,505 | 54,118,186 | 33.7 | 29.0 |
| Oklahoma..... | 2,310 | 1,123 | 4 | ... | 0.2 | ... | 4,884,270 | ... | 9.1 | ... |
| Texas..... | 4,583 | 3,158 | 36 | 17 | 0.8 | 0.5 | 102,054,306 | 39,030,054 | 37.4 | 25.9 |
| MOUNTAIN: | | | | | | | | | | |
| Montana..... | 677 | 382 | 6 | 6 | 0.9 | 1.6 | 49,871,216 | 52,545,498 | 68.1 | 79.1 |
| Colorado..... | 2,034 | 1,606 | 20 | 16 | 1.0 | 1.0 | 58,645,700 | 50,679,463 | 45.1 | 50.6 |
| Arizona..... | 311 | 169 | 9 | 7 | 2.9 | 4.1 | 42,276,901 | 22,761,981 | 54.1 | 81.0 |
| Utah..... | 749 | 606 | 7 | 5 | 0.9 | 0.8 | 33,109,176 | 20,973,066 | 53.4 | 53.9 |
| PACIFIC: | | | | | | | | | | |
| Washington..... | 3,674 | 2,751 | 20 | 13 | 0.5 | 0.5 | 42,379,727 | 28,001,570 | 19.2 | 21.7 |
| Oregon..... | 2,246 | 1,602 | 8 | 5 | 0.4 | 0.3 | 14,398,817 | 7,873,817 | 15.5 | 14.2 |
| California..... | 7,659 | 6,839 | 71 | 31 | 0.9 | 0.5 | 202,103,929 | 105,272,449 | 38.2 | 28.7 |
| All other states * | 5,853 | 3,560 | 8 | 6 | 0.1 | 0.2 | 17,938,958 | 8,162,677 | 10.8 | 8.0 |

* Excluded to avoid disclosures of individual establishments, but included in the total for the United States.

* All other states embrace Idaho, Mississippi, Nevada, North Dakota, and Wyoming in 1909 and Arkansas, District of Columbia, Mississippi, and New Mexico in 1904.

In a large majority of the states, establishments manufacturing products to the value of \$1,000,000 or more represented a larger proportion of the total number of establishments in 1909 than in 1904, and reported a larger proportion of the total value of

products in the later year than in the earlier. The only states where this was not true with respect to the value of products are Vermont, Delaware, South Carolina, Nebraska, Montana, Colorado, Utah, and Washington.

Establishments grouped according to number of wage earners: 1909.—In some respects, and especially from the standpoint of conditions under which persons engaged in manufactures work, the best classification of establishments to bring out the feature of size is a classification according to the number of wage earners employed, which is shown by Table 26.

Table 26

| ESTABLISHMENTS EMPLOYING— | ESTABLISHMENTS, WAGE EARNERS, AND PER CENT OF TOTAL. | | | |
|--------------------------------|--|---------------------------------|--------------------|---------------|
| | Number of establishments. | Average number of wage earners. | Per cent of total. | |
| | | | Estab-lish-ments. | Wage earners. |
| Total..... | 268,491 | 6,615,046 | 100.0 | 100.0 |
| No wage earners..... | 27,712 | ..... | 10.3 | ..... |
| 1 to 5 wage earners..... | 136,289 | 311,704 | 50.8 | 4.7 |
| 6 to 20 wage earners..... | 57,198 | 640,793 | 21.3 | 9.7 |
| 21 to 50 wage earners..... | 23,544 | 764,408 | 8.8 | 11.6 |
| 51 to 100 wage earners..... | 10,964 | 782,298 | 4.1 | 11.8 |
| 101 to 250 wage earners..... | 8,116 | 1,258,639 | 3.0 | 19.0 |
| 251 to 500 wage earners..... | 2,905 | 1,006,467 | 1.1 | 15.2 |
| 501 to 1,000 wage earners..... | 1,223 | 837,473 | 0.5 | 12.7 |
| Over 1,000 wage earners..... | 540 | 1,013,274 | 0.2 | 15.3 |

Of the 268,491 establishments reported for all industries, 10.3 per cent employed no wage earners; 50.8 per cent, from 1 to 5; 21.3 per cent, 6 to 20; and 8.8 per cent, 21 to 50. The most numerous single group consists of the 136,289 establishments employing from 1 to 5 wage earners, and the next of the 57,198 establishments employing from 6 to 20 wage earners. There were 4,668 establishments that reported the employment of over 250 wage earners; 540 of these employed over 1,000.

The single group having the largest number of wage earners was the group comprising the establishments employing from 101 to 250. This group employed 1,258,639 wage earners, or 19 per cent of the total number.

Table 27 shows, for 1909, for all industries combined and for 43 industries individually the number of establishments and average number of wage earners, by groups, and the percentage of wage earners in each group for these industries.

Table 27

| INDUSTRY. | ESTABLISHMENTS EMPLOYING— | | | | | | | | | | | | | | | |
|---|---------------------------|--------------------------------|-------------------|-----------------------|---------------|-------------------------|---------------|--------------------------|---------------|------------------------|---------------|---|-------------------------|--------------------------|------------------------|--|
| | Total. | | No wage earners. | 1 to 20 wage earners. | | 21 to 100 wage earners. | | 101 to 500 wage earners. | | Over 500 wage earners. | | Per cent wage earners in establishments employing specified number form of total. | | | | |
| | Estab-lish-ments. | Wage earners (average number). | Estab-lish-ments. | Estab-lish-ments. | Wage earners. | Estab-lish-ments. | Wage earners. | Estab-lish-ments. | Wage earners. | Estab-lish-ments. | Wage earners. | 1 to 20 wage earners. | 21 to 100 wage earners. | 101 to 500 wage earners. | Over 500 wage earners. | |
| All industries..... | 268,491 | 6,615,046 | 27,712 | 193,487 | 952,497 | 34,508 | 1,546,706 | 11,021 | 2,265,096 | 1,763 | 1,850,747 | 14.4 | 23.4 | 34.2 | 28.0 | |
| Agricultural implements..... | 640 | 50,551 | 40 | 372 | 2,007 | 133 | 0,400 | 77 | 17,902 | 18 | 24,176 | 4.1 | 12.7 | 35.4 | 47.8 | |
| Automobiles, including bodies and parts | 743 | 75,721 | 12 | 393 | 2,716 | 195 | 9,483 | 108 | 29,708 | 35 | 30,754 | 3.6 | 12.5 | 31.3 | 52.5 | |
| Boots and shoes, including out stock and findings..... | 1,918 | 198,207 | 49 | 839 | 6,170 | 538 | 27,268 | 414 | 97,691 | 78 | 67,162 | 3.1 | 13.8 | 49.2 | 33.9 | |
| Brass and bronze products..... | 1,021 | 40,618 | 56 | 717 | 4,421 | 174 | 7,416 | 61 | 12,422 | 13 | 16,359 | 10.9 | 18.2 | 30.6 | 40.2 | |
| Bread and other bakery products..... | 23,925 | 100,216 | 3,643 | 19,751 | 60,112 | 426 | 17,977 | 101 | 17,880 | 5 | 4,247 | 59.9 | 17.9 | 17.9 | 4.2 | |
| Butter, cheese, and condensed milk..... | 8,470 | 18,431 | 1,025 | 7,332 | 12,634 | 115 | 4,852 | 7 | 945 | ..... | ..... | 68.5 | 26.3 | 5.1 | ..... |  |
| Canning and preserving..... | 3,767 | 59,968 | 92 | 3,015 | 17,575 | 571 | 24,519 | 86 | 15,459 | 3 | 2,415 | 29.3 | 40.9 | 25.8 | 4.0 | |
| Carriages and wagons and materials..... | 5,492 | 69,928 | 440 | 4,462 | 23,141 | 484 | 21,765 | 98 | 17,729 | 8 | 7,293 | 33.1 | 31.1 | 25.3 | 10.4 | |
| Cars and general shop construction and repairs by steam-railroad companies..... | 1,145 | 292,174 | ..... | 251 | 2,400 | 310 | 16,841 | 418 | 101,068 | 166 | 101,850 | 0.9 | 6.0 | 35.8 | 57.4 | |
| Cars, steam-railroad, not including operations of railroad companies..... | 110 | 43,086 | 1 | 12 | 130 | 36 | 1,886 | 30 | 9,009 | 22 | 31,401 | 0.3 | 4.4 | 22.5 | 72.8 | |
| Chemicals..... | 340 | 23,714 | 11 | 203 | 1,432 | 88 | 4,004 | 36 | 8,626 | 11 | 9,052 | 0.1 | 16.9 | 36.4 | 40.7 | |
| Clothing, men's, including shirts..... | 6,354 | 239,696 | 101 | 3,713 | 33,185 | 2,045 | 85,702 | 353 | 70,846 | 52 | 49,903 | 13.8 | 35.7 | 29.5 | 20.8 | |
| Clothing, women's..... | 4,558 | 153,743 | 68 | 2,438 | 23,813 | 1,754 | 74,955 | 292 | 51,014 | 6 | 3,951 | 15.5 | 45.7 | 33.1 | 2.6 | |
| Confectionery..... | 1,944 | 44,638 | 136 | 1,376 | 7,194 | 313 | 14,547 | 115 | 20,145 | 4 | 2,762 | 16.2 | 32.6 | 45.1 | 6.2 | |
| Copper, tin, and sheet-iron products..... | 4,228 | 73,615 | 183 | 3,498 | 17,635 | 407 | 10,962 | 124 | 26,931 | 16 | 12,087 | 23.9 | 23.1 | 36.6 | 16.4 | |
| Cotton goods, including cotton small wares..... | 1,324 | 378,880 | 3 | 139 | 1,418 | 405 | 22,851 | 573 | 135,735 | 204 | 218,876 | 0.3 | 6.0 | 35.9 | 57.7 | |
| Electrical machinery, apparatus, and supplies..... | 1,009 | 87,256 | 22 | 607 | 3,088 | 243 | 11,357 | 117 | 23,885 | 20 | 48,020 | 4.5 | 13.0 | 27.4 | 55.0 | |
| Flour-mill and gristmill products..... | 11,601 | 39,453 | 1,840 | 9,587 | 26,023 | 239 | 9,326 | 13 | 2,124 | 3 | 1,050 | 65.9 | 23.6 | 5.4 | 5.0 | |
| Foundry and machine-shop products..... | 13,253 | 531,611 | 639 | 8,561 | 54,963 | 2,902 | 133,613 | 1,000 | 203,427 | 142 | 139,008 | 10.3 | 25.2 | 38.3 | 26.1 | |
| Furniture and refrigerators..... | 3,165 | 128,452 | 95 | 1,055 | 11,569 | 1,106 | 53,607 | 287 | 59,458 | 12 | 9,818 | 9.0 | 41.8 | 41.6 | 7.6 | |
| Gas, illuminating and heating..... | 1,206 | 37,215 | 108 | 939 | 4,811 | 180 | 8,377 | 58 | 11,520 | 11 | 12,498 | 12.9 | 22.5 | 31.0 | 33.6 | |
| Hosiery and knit goods..... | 1,374 | 120,275 | 31 | 466 | 4,380 | 521 | 26,620 | 323 | 68,059 | 33 | 30,210 | 3.4 | 20.6 | 52.6 | 23.4 | |
| Iron and steel, blast furnaces..... | 208 | 38,429 | ..... | 11 | 125 | 78 | 5,082 | 105 | 22,454 | 14 | 10,763 | 0.3 | 13.3 | 68.4 | 28.0 | |
| Iron and steel, steel works and rolling mills..... | 446 | 240,076 | ..... | 26 | 287 | 94 | 5,083 | 187 | 49,965 | 139 | 184,141 | 0.1 | 2.4 | 20.8 | 76.7 | |
| Leather goods..... | 2,375 | 34,907 | 107 | 1,876 | 9,818 | 333 | 14,390 | 58 | 10,061 | 1 | 638 | 28.2 | 41.3 | 28.8 | 1.8 | |
| Leather, tanned, curried, and finished..... | 919 | 62,202 | 30 | 379 | 2,064 | 350 | 17,765 | 142 | 26,890 | 18 | 14,883 | 4.3 | 28.5 | 43.2 | 24.0 | |
| Liquors, distilled..... | 613 | 6,430 | 41 | 487 | 1,793 | 76 | 3,132 | 9 | 1,500 | ..... | ..... | 28.0 | 48.8 | 23.3 | ..... |  |
| Liquors, malt..... | 1,414 | 54,579 | 23 | 752 | 7,078 | 551 | 24,636 | 80 | 15,034 | 8 | 7,891 | 12.9 | 45.2 | 27.6 | 14.4 | |
| Lumber and timber products..... | 40,671 | 695,019 | 909 | 33,902 | 186,140 | 4,559 | 196,704 | 1,214 | 241,234 | 87 | 70,941 | 26.8 | 28.3 | 34.7 | 10.2 | |
| Marble and stone work..... | 4,964 | 65,003 | 204 | 4,010 | 19,650 | 595 | 24,955 | 92 | 17,176 | 3 | 3,822 | 30.0 | 38.0 | 26.2 | 5.8 | |
| Oil, cottonseed, and cake..... | 817 | 17,071 | ..... | 511 | 5,703 | 301 | 10,772 | 5 | 596 | ..... | ..... | 33.4 | 63.1 | 3.5 | ..... |  |
| Paint and varnish..... | 791 | 14,240 | 38 | 602 | 3,073 | 117 | 6,139 | 33 | 5,397 | 1 | 631 | 21.5 | 36.1 | 37.9 | 4.4 | |
| Paper and wood pulp..... | 777 | 75,978 | ..... | 193 | 2,231 | 352 | 17,849 | 215 | 43,930 | 17 | 11,968 | 2.9 | 23.4 | 57.9 | 15.8 | |
| Patent medicines and compounds and druggists' preparations..... | 3,642 | 22,895 | 1,051 | 2,396 | 8,103 | 165 | 6,757 | 27 | 4,971 | 3 | 2,974 | 35.8 | 29.5 | 21.7 | 13.0 | |
| Petroleum, refining..... | 147 | 13,929 | ..... | 75 | 718 | 43 | 1,810 | 23 | 6,205 | 6 | 5,106 | 5.1 | 13.0 | 45.2 | 36.6 | |
| Printing and publishing..... | 31,445 | 258,434 | 6,940 | 22,254 | 93,683 | 1,877 | 79,316 | 344 | 63,240 | 30 | 22,195 | 36.3 | 30.7 | 24.4 | 8.6 | |
| Silk and silk goods, including throwsters | 852 | 99,037 | 3 | 243 | 2,512 | 335 | 17,604 | 243 | 52,830 | 28 | 20,091 | 2.6 | 17.8 | 53.3 | 26.4 | |
| Slaughtering and meat packing..... | 1,641 | 89,728 | 86 | 1,206 | 6,096 | 247 | 11,404 | 62 | 13,911 | 40 | 58,317 | 6.8 | 12.8 | 15.5 | 65.0 | |
| Smelting and refining, copper..... | 38 | 15,023 | ..... | ..... | ..... | 7 | 453 | 19 | 4,343 | 12 | 10,832 | ..... | 2.9 | 27.8 | 69.3 | |
| Smelting and refining, lead..... | 28 | 7,424 | ..... | 5 | 56 | 3 | 167 | 16 | 4,940 | 4 | 2,261 | 0.7 | 2.2 | 66.5 | 30.5 | |
| Sugar and molasses..... | 214 | 4,127 | ..... | 150 | 1,463 | 62 | 2,208 | 2 | 366 | ..... | ..... | 35.4 | 55.7 | 8.9 | ..... |  |
| Tobacco manufactures..... | 15,822 | 166,810 | 4,095 | 9,823 | 34,483 | 695 | 30,070 | 258 | 55,483 | 51 | 40,774 | 20.6 | 18.0 | 33.3 | 28.1 | |
| Woolen, worsted, and felt goods, and wool hats..... | 985 | 108,722 | 30 | 219 | 1,578 | 346 | 19,024 | 334 | 67,460 | 56 | 79,760 | 1.0 | 11.8 | 40.0 | 47.2 | |
| All other industries..... | 61,906 | 1,657,840 | 4,501 | 44,041 | 243,350 | 10,137 | 450,452 | 2,844 | 566,708 | 383 | 397,330 | ..... | ..... | ..... | ..... |  |

In 17 of the 43 industries listed separately in the table, establishments employing from 1 to 100 wage earners reported more than one-half of the total number employed in each industry. In 5 of these industries, establishments employing from 101 to 500 wage earners reported more than one-half of the total number, while 8 establishments employing over 500 wage earners reported more than one-half of the total.

The highest proportion (76.7 per cent) of wage earners employed by establishments reporting an average of more than 500 was in the steel works and rolling mill branch of the iron and steel industry.

Table 28 shows, for 1909, for geographic divisions and states, the number of establishments and average number of wage earners, by groups, and the percentage of wage earners in each group, for these divisions and states.

Table 28

| Table 28 DIVISION AND STATE. | ESTABLISHMENTS EMPLOYING— | | | | | | | | | | | | | | | |
|-------------------------------------|---------------------------|---------------|-------------------|-----------------------|---------------|-------------------------|---------------|--------------------------|---------------|------------------------|---------------|---|-------------------------|--------------------------|------------------------|--|
| | TOTAL. | | No wage earners. | 1 to 20 wage earners. | | 21 to 100 wage earners. | | 101 to 500 wage earners. | | Over 500 wage earners. | | Per cent wage earners in establishments employing specified number form of total. | | | | |
| | Estab-lish-ments. | Wage earners. | Estab-lish-ments. | Estab-lish-ments. | Wage earners. | Estab-lish-ments. | Wage earners. | Estab-lish-ments. | Wage earners. | Estab-lish-ments. | Wage earners. | 1 to 20 wage earners. | 21 to 100 wage earners. | 101 to 500 wage earners. | Over 500 wage earners. | |
| United States..... | 268,491 | 6,615,046 | 27,712 | 193,487 | 952,497 | 34,508 | 1,546,706 | 11,021 | 2,265,096 | 1,763 | 1,850,747 | 14.4 | 23.4 | 34.2 | 28.0 | |
| GEOGRAPHIC DIVISIONS: | | | | | | | | | | | | | | | | |
| New England..... | 25,351 | 1,101,290 | 2,132 | 17,116 | 91,008 | 4,012 | 183,104 | 1,099 | 303,839 | 392 | 463,279 | 8.3 | 16.6 | 38.6 | 42.1 | |
| Middle Atlantic..... | 81,315 | 2,207,747 | 8,918 | 55,764 | 291,378 | 12,427 | 556,007 | 3,632 | 742,393 | 574 | 617,969 | 13.2 | 25.1 | 31.6 | 28.0 | |
| East North Central..... | 60,013 | 1,513,764 | 7,274 | 42,252 | 192,201 | 7,411 | 340,201 | 2,647 | 540,595 | 429 | 440,767 | 12.7 | 22.5 | 35.7 | 29.1 | |
| West North Central..... | 27,171 | 374,337 | 3,667 | 20,787 | 78,209 | 2,051 | 90,275 | 574 | 117,981 | 92 | 87,872 | 20.9 | 24.1 | 31.5 | 23.5 | |
| South Atlantic..... | 28,088 | 663,015 | 1,009 | 12,271 | 118,935 | 3,854 | 169,759 | 1,135 | 231,455 | 159 | 142,866 | 18.0 | 25.6 | 34.9 | 21.5 | |
| East South Central..... | 15,381 | 261,772 | 911 | 12,270 | 62,082 | 1,710 | 74,579 | 447 | 89,188 | 43 | 25,323 | 23.9 | 28.5 | 34.0 | 13.5 | |
| West South Central..... | 12,339 | 204,520 | 1,028 | 9,645 | 49,180 | 1,262 | 53,546 | 373 | 74,471 | 31 | 27,323 | 24.1 | 26.2 | 36.5 | 13.3 | |
| Mountain..... | 5,254 | 75,435 | 677 | 4,079 | 16,775 | 360 | 16,232 | 119 | 25,988 | 19 | 16,440 | 22.3 | 21.5 | 34.4 | 21.8 | |
| Pacific..... | 13,579 | 213,166 | 1,436 | 10,303 | 52,069 | 1,421 | 63,003 | 395 | 79,186 | 24 | 18,908 | 24.4 | 29.5 | 37.1 | 8.9 | |
| NEW ENGLAND: | | | | | | | | | | | | | | | | |
| Maine..... | 3,540 | 79,955 | 298 | 2,716 | 12,363 | 387 | 18,190 | 123 | 25,207 | 22 | 24,195 | 15.5 | 22.8 | 31.6 | 39.2 | |
| New Hampshire..... | 1,961 | 78,658 | 158 | 1,409 | 7,201 | 256 | 11,326 | 114 | 24,621 | 24 | 35,510 | 9.1 | 14.4 | 31.3 | 45.1 | |
| Vermont..... | 1,958 | 33,788 | 131 | 1,514 | 7,023 | 255 | 10,343 | 55 | 11,852 | 3 | 4,570 | 20.7 | 20.6 | 35.1 | 13.5 | |
| Massachusetts..... | 11,684 | 584,559 | 943 | 7,548 | 43,134 | 2,109 | 95,989 | 867 | 185,876 | 217 | 250,560 | 7.3 | 16.4 | 31.8 | 44.4 | |
| Rhode Island..... | 1,951 | 113,538 | 158 | 1,190 | 7,046 | 359 | 17,352 | 195 | 45,396 | 43 | 43,774 | 6.2 | 15.3 | 29.9 | 38.5 | |
| Connecticut..... | 4,251 | 210,782 | 444 | 2,733 | 14,301 | 646 | 29,904 | 345 | 70,917 | 83 | 95,670 | 6.8 | 14.2 | 33.6 | 45.4 | |
| MIDDLE ATLANTIC: | | | | | | | | | | | | | | | | |
| New York..... | 44,935 | 1,003,981 | 4,667 | 31,323 | 169,732 | 7,107 | 307,812 | 1,637 | 321,531 | 201 | 204,906 | 16.9 | 26.7 | 32.1 | 29.4 | |
| New Jersey..... | 8,817 | 326,223 | 712 | 6,088 | 32,544 | 1,354 | 64,402 | 557 | 119,964 | 106 | 109,313 | 10.0 | 19.7 | 26.7 | 33.5 | |
| Pennsylvania..... | 27,503 | 877,543 | 3,530 | 18,353 | 89,102 | 3,966 | 183,793 | 1,438 | 300,898 | 267 | 303,750 | 10.1 | 21.0 | 34.2 | 34.6 | |
| EAST NORTH CENTRAL: | | | | | | | | | | | | | | | | |
| Ohio..... | 15,138 | 446,934 | 1,521 | 10,483 | 52,358 | 2,162 | 99,146 | 834 | 168,458 | 138 | 126,572 | 11.7 | 22.2 | 37.7 | 28.4 | |
| Indiana..... | 7,969 | 186,984 | 692 | 5,966 | 26,681 | 956 | 44,434 | 299 | 60,492 | 56 | 55,377 | 14.3 | 23.8 | 32.3 | 29.6 | |
| Illinois..... | 18,026 | 465,764 | 2,518 | 12,361 | 60,101 | 2,287 | 102,346 | 735 | 149,670 | 125 | 153,647 | 12.9 | 22.0 | 32.1 | 32.0 | |
| Michigan..... | 9,169 | 231,499 | 1,200 | 6,297 | 28,054 | 1,154 | 54,516 | 447 | 91,443 | 61 | 57,496 | 12.1 | 23.6 | 39.5 | 24.9 | |
| Wisconsin..... | 9,721 | 182,583 | 1,343 | 7,145 | 25,007 | 852 | 39,759 | 332 | 70,532 | 49 | 47,285 | 13.7 | 21.7 | 38.6 | 25.9 | |
| WEST NORTH CENTRAL: | | | | | | | | | | | | | | | | |
| Minnesota..... | 5,561 | 84,767 | 603 | 4,352 | 16,648 | 448 | 20,096 | 131 | 26,590 | 27 | 21,433 | 19.6 | 23.8 | 31.4 | 25.3 | |
| Iowa..... | 5,528 | 61,635 | 643 | 4,340 | 16,072 | 443 | 19,412 | 92 | 18,845 | 10 | 7,396 | 26.0 | 31.5 | 30.6 | 11.8 | |
| Missouri..... | 8,375 | 152,903 | 1,123 | 6,183 | 26,287 | 764 | 33,819 | 268 | 55,632 | 37 | 37,255 | 17.2 | 22.1 | 26.4 | 24.4 | |
| North Dakota..... | 762 | 2,789 | 125 | 601 | 1,610 | 24 | 932 | 2 | 247 | ----- | ----- | 57.7 | 33.4 | 8.9 | ----- | |
| South Dakota..... | 1,020 | 3,602 | 146 | 850 | 2,291 | 21 | 827 | 3 | 484 | ----- | ----- | 63.6 | 23.0 | 13.4 | ----- | |
| Nebraska..... | 2,500 | 24,336 | 481 | 1,809 | 6,295 | 121 | 5,358 | 23 | 4,989 | 6 | 7,694 | 25.9 | 22.0 | 20.5 | 31.6 | |
| Kansas..... | 3,435 | 44,215 | 546 | 2,592 | 9,006 | 230 | 9,831 | 55 | 11,194 | 12 | 14,184 | 20.4 | 22.3 | 25.3 | 32.1 | |
| SOUTH ATLANTIC: | | | | | | | | | | | | | | | | |
| Delaware..... | 726 | 21,238 | 46 | 534 | 3,222 | 101 | 4,216 | 38 | 6,807 | 7 | 6,993 | 15.1 | 19.9 | 32.1 | 32.9 | |
| Maryland..... | 4,837 | 107,921 | 504 | 3,538 | 18,629 | 596 | 26,209 | 169 | 34,176 | 30 | 28,847 | 17.2 | 24.3 | 31.7 | 28.7 | |
| District of Columbia..... | 518 | 7,707 | 75 | 351 | 1,937 | 83 | 3,665 | 8 | 1,547 | 1 | 1,555 | 25.1 | 47.5 | 39.1 | 7.2 | |
| Virginia..... | 5,685 | 105,676 | 270 | 4,689 | 25,491 | 562 | 25,570 | 138 | 27,112 | 26 | 27,503 | 23.2 | 24.1 | 25.7 | 26.1 | |
| West Virginia..... | 2,586 | 63,893 | 200 | 1,920 | 8,726 | 323 | 15,183 | 125 | 26,191 | 18 | 13,763 | 13.6 | 23.7 | 41.0 | 21.6 | |
| North Carolina..... | 4,931 | 121,473 | 171 | 3,852 | 21,027 | 654 | 30,288 | 282 | 47,013 | 22 | 23,145 | 17.3 | 25.0 | 38.7 | 19.0 | |
| South Carolina..... | 1,854 | 73,046 | 60 | 1,411 | 7,990 | 209 | 9,394 | 145 | 38,116 | 29 | 22,546 | 11.0 | 12.9 | 45.3 | 39.9 | |
| Georgia..... | 4,792 | 104,588 | 231 | 3,589 | 22,164 | 779 | 38,430 | 175 | 34,448 | 18 | 14,546 | 21.2 | 32.0 | 32.9 | 13.9 | |
| Florida..... | 2,159 | 57,473 | 112 | 1,387 | 9,749 | 547 | 21,744 | 105 | 21,045 | 8 | 4,935 | 16.9 | 37.8 | 38.6 | 8.6 | |
| EAST SOUTH CENTRAL: | | | | | | | | | | | | | | | | |
| Kentucky..... | 4,776 | 65,400 | 403 | 3,801 | 16,724 | 462 | 20,780 | 102 | 19,830 | 8 | 8,066 | 25.6 | 31.7 | 30.3 | 12.3 | |
| Tennessee..... | 4,609 | 73,840 | 306 | 3,679 | 18,617 | 471 | 21,271 | 143 | 26,348 | 10 | 7,604 | 25.2 | 28.8 | 35.7 | 10.3 | |
| Alabama..... | 3,398 | 72,148 | 131 | 2,714 | 14,877 | 411 | 17,698 | 127 | 26,505 | 15 | 13,068 | 20.6 | 24.5 | 26.8 | 18.1 | |
| Mississippi..... | 2,598 | 50,384 | 71 | 2,076 | 12,464 | 366 | 14,830 | 75 | 16,505 | 10 | 6,585 | 24.7 | 29.4 | 32.8 | 13.1 | |
| WEST SOUTH CENTRAL: | | | | | | | | | | | | | | | | |
| Arkansas..... | 2,925 | 44,982 | 169 | 2,368 | 12,493 | 308 | 12,843 | 73 | 14,087 | 7 | 5,559 | 27.8 | 28.6 | 31.3 | 12.3 | |
| Louisiana..... | 2,516 | 76,165 | 118 | 1,799 | 11,797 | 430 | 18,573 | 157 | 33,497 | 12 | 11,068 | 15.5 | 24.8 | 44.0 | 15.8 | |
| Oklahoma..... | 2,310 | 13,143 | 262 | 1,949 | 7,039 | 85 | 3,462 | 10 | 1,888 | 1 | 754 | 53.5 | 26.4 | 14.3 | 5.7 | |
| Texas..... | 4,588 | 70,230 | 479 | 3,529 | 17,851 | 436 | 18,368 | 133 | 24,999 | 11 | 9,612 | 25.4 | 26.1 | 35.6 | 12.9 | |
| MOUNTAIN: | | | | | | | | | | | | | | | | |
| Montana..... | 677 | 11,655 | 92 | 513 | 2,000 | 52 | 2,286 | 17 | 3,854 | 3 | 3,515 | 17.1 | 19.6 | 33.1 | 30.2 | |
| Idaho..... | 725 | 8,220 | 56 | 617 | 2,402 | 41 | 1,786 | 8 | 1,614 | 3 | 2,418 | 29.3 | 21.7 | 19.6 | 29.4 | |
| Wyoming..... | 268 | 2,867 | 40 | 216 | 603 | 3 | 1,044 | 8 | 1,347 | 1 | 753 | 21.0 | 5.7 | 47.0 | 26.3 | |
| Colorado..... | 2,084 | 28,067 | 325 | 1,511 | 6,859 | 147 | 6,942 | 48 | 10,887 | 3 | 3,379 | 24.4 | 24.8 | 28.8 | 12.1 | |
| New Mexico..... | 313 | 4,143 | 31 | 256 | 1,033 | 17 | 756 | 8 | 1,701 | 1 | 653 | 24.2 | 18.3 | 41.1 | 16.5 | |
| Arizona..... | 311 | 6,441 | 36 | 245 | 940 | 16 | 786 | 12 | 3,172 | 2 | 1,543 | 14.6 | 12.2 | 49.3 | 24.0 | |
| Utah..... | 749 | 11,785 | 74 | 582 | 2,478 | 71 | 2,825 | 17 | 2,970 | 5 | 3,512 | 21.0 | 24.0 | 25.2 | 29.8 | |
| Nevada..... | 177 | 2,257 | 23 | 139 | 490 | 13 | 687 | 1 | 443 | 1 | 637 | 21.7 | 20.5 | 19.6 | 28.2 | |
| PACIFIC: | | | | | | | | | | | | | | | | |
| Washington..... | 3,674 | 69,120 | 322 | 2,713 | 15,858 | 483 | 21,821 | 153 | 28,931 | 3 | 2,510 | 22.9 | 31.6 | 41.9 | 3.7 | |
| Oregon..... | 2,246 | 28,750 | 232 | 1,759 | 7,065 | 200 | 8,954 | 52 | 10,279 | 3 | 1,822 | 26.7 | 31.1 | 35.8 | 6.3 | |
| California..... | 7,659 | 115,296 | 582 | 5,831 | 28,516 | 738 | 32,228 | 190 | 39,976 | 18 | 14,576 | 24.7 | 27.9 | 34.6 | 12.7 | |

DISTRIBUTION OF EXPENSES.

Expenses in leading industries.—As stated in the Introduction, the census does not purport to furnish figures that can be used for determining the total cost of manufacture and consequently the profits. Facts of interest can, however, be brought out concerning the relative importance of those classes of expenses which are reported. The following table shows in percentages the distribution of these expenses among the classes indicated, for all industries combined and for the 43 principal industries separately.

| INDUSTRY. | PER CENT OF TOTAL EXPENSES REPORTED. | | | |
|--|--------------------------------------|-------------|-------------|-------------------------|
| | Salaries. | Wages. | Materials. | Miscellaneous expenses. |
| All industries | 5.1 | 18.6 | 65.8 | 10.5 |
| Agricultural implements | 8.6 | 24.3 | 51.1 | 16.0 |
| Automobiles, including bodies and parts | 4.5 | 23.1 | 62.5 | 9.9 |
| Boots and shoes, including cut stock and findings | 3.9 | 20.6 | 69.6 | 5.9 |
| Brass and bronze products | 4.1 | 17.3 | 72.6 | 6.0 |
| Bread and other bakery products | 4.0 | 17.4 | 69.9 | 8.6 |
| Butter, cheese, and condensed milk | 1.4 | 4.3 | 91.0 | 3.3 |
| Canning and preserving | 5.6 | 13.5 | 72.0 | 9.0 |
| Carriages and wagons and materials | 5.7 | 27.0 | 58.9 | 8.4 |
| Cars and general shop construction and repairs by steam-railroad companies | 4.3 | 44.7 | 49.2 | 1.8 |
| Cars, steam-railroad, not including operations of railroad companies | 4.3 | 23.0 | 66.7 | 6.0 |
| Chemicals | 6.5 | 15.0 | 63.2 | 10.3 |
| Clothing, men's, including shirts | 5.2 | 20.7 | 57.9 | 16.2 |
| Clothing, women's | 6.0 | 23.0 | 61.1 | 9.9 |
| Confectionery | 7.6 | 13.1 | 67.9 | 11.4 |
| Copper, tin, and sheet-iron products | 5.8 | 22.4 | 63.7 | 8.1 |
| Cotton goods, including cotton small wares | 2.6 | 24.0 | 66.9 | 6.5 |
| Electrical machinery, apparatus, and supplies | 10.0 | 24.5 | 53.8 | 11.7 |
| Flour-mill and gristmill products | 1.5 | 2.6 | 92.8 | 3.1 |
| Foundry and machine-shop products | 8.7 | 29.8 | 50.1 | 11.4 |
| Furniture and refrigerators | 7.3 | 30.8 | 51.0 | 10.9 |
| Gas, illuminating and heating | 10.9 | 18.4 | 46.2 | 24.5 |
| Hosiery and knit goods | 4.4 | 25.5 | 62.7 | 7.4 |
| Iron and steel, blast furnaces | 1.8 | 6.8 | 88.4 | 3.0 |
| Iron and steel, steel works and rolling mills | 2.9 | 18.3 | 73.9 | 4.8 |
| Leather goods | 7.2 | 19.3 | 64.0 | 8.9 |
| Leather, tanned, curried, and finished | 2.2 | 10.5 | 81.2 | 6.1 |
| Liquors, distilled | 1.0 | 1.6 | 18.4 | 79.0 |
| Liquors, malt | 7.6 | 13.7 | 32.2 | 46.5 |
| Lumber and timber products | 4.8 | 32.0 | 51.0 | 12.2 |
| Marble and stone work | 6.7 | 44.8 | 39.4 | 9.1 |
| Oil, cottonseed, and cake | 3.1 | 4.3 | 87.7 | 4.9 |
| Paint and varnish | 9.8 | 7.4 | 71.1 | 12.2 |
| Paper and wood pulp | 4.0 | 17.2 | 69.7 | 9.1 |
| Patent medicines and compounds and druggists' preparations | 14.9 | 8.7 | 44.1 | 32.4 |
| Petroleum, refining | 1.8 | 4.4 | 39.6 | 4.2 |
| Printing and publishing | 16.7 | 26.6 | 32.6 | 24.1 |
| Silk and silk goods, including throwsters | 4.2 | 21.8 | 60.8 | 13.2 |
| Slaughtering and meat packing | 1.5 | 3.9 | 91.3 | 3.3 |
| Smelting and refining, copper | 0.7 | 3.8 | 94.4 | 1.1 |
| Smelting and refining, lead | 0.9 | 3.4 | 94.8 | 0.9 |
| Sugar and molasses, not including beet sugar | 0.9 | 2.8 | 92.6 | 3.7 |
| Tobacco manufactures | 4.6 | 19.0 | 48.4 | 28.0 |
| Woolen, worsted, and felt goods, and wool hats | 2.6 | 18.7 | 72.9 | 5.8 |
| All other industries | 6.4 | 21.1 | 62.1 | 10.5 |

This table shows that, for all industries combined, 65.8 per cent of the total expenses reported were incurred for materials, 23.7 per cent for services (that is, salaries and wages), and 10.5 per cent for other purposes. As would be expected, these proportions vary greatly in the different industries. The item of salaries takes on large proportions in such industries as the gas industry, the manufacture of patent medicines, and printing and publishing, which require a

large force of employees for accounting and collecting. The industries for which the highest percentages for wages are shown—in each case over 30 per cent—are marble and stone work, steam-railroad repair shops, the lumber and timber industry, and the furniture industry. The cost of materials constituted over 90 per cent of the expenses reported in the smelting and refining of copper and lead, flour and grist milling and the manufacture of sugar and molasses, slaughtering and meat packing, and the butter, cheese, and condensed-milk industry. Miscellaneous expenses, which are made up principally of rent, taxes, insurance, and advertising, are relatively largest in the distillery and brewery industries, the manufacture of patent medicines and compounds, and the tobacco-products industry, all of which are subject to internal-revenue taxes; they are also large in the gas and the printing and publishing industries.

Expenses, by states.—Table 30 shows, for each geographic division and each state, the per cent distribution in 1909 of the total expenses reported among the principal items.

The variation among the several divisions and states in the percentage of the total expenses which is represented by each class follows closely the variation in the character of the predominating industries. Thus the percentage of expenses incurred for materials is highest and that incurred for wages lowest in the West North Central division, this condition being due to the predominating importance in those states of the flour-milling and the slaughtering industries, in which materials contribute the greater part of the value of products. The proportion of expenses incurred for materials is also high in the Mountain division, on account of the influence of the smelting and refining industries. Wages represent the highest percentage of the total expenses, 23.7, in the New England division, where the textile and other highly elaborative industries predominate.

Among the individual states the highest percentage for materials is shown for Kansas and the next highest for Nebraska, while this percentage is lowest in Florida; the highest percentages for wages are shown for Wyoming, New Mexico, and Florida, in the order named. Among the great manufacturing states of the East and North there is no very great variation in the distribution of expenses among the various items. Of the 10 most important manufacturing states, Massachusetts has the highest proportion for wages and is among the lowest for miscellaneous expenses.

The exceptionally high percentage for miscellaneous expenses in Kentucky, 25.8, is due to the importance there of the distillery industry, in the miscellaneous expenses of which are included very large sums paid as internal-revenue tax.

Table 30

| DIVISION AND STATE. | PER CENT OF TOTAL EXPENSES REPORTED. | | | | DIVISION AND STATE. | PER CENT OF TOTAL EXPENSES REPORTED. | | | |
|------------------------------|--------------------------------------|-------------|-------------|-------------------------|----------------------------|--------------------------------------|--------|------------|-------------------------|
| | Salaries. | Wages. | Materials. | Miscellaneous expenses. | | Salaries. | Wages. | Materials. | Miscellaneous expenses. |
| United States..... | 5.1 | 18.6 | 65.8 | 10.5 | SOUTH ATLANTIC: | | | | |
| GEOGRAPHIC DIVISIONS: | | | | | Delaware..... | 4.9 | 21.9 | 65.9 | 7.2 |
| New England..... | 4.8 | 23.7 | 62.6 | 8.9 | Maryland..... | 4.8 | 15.9 | 69.6 | 9.7 |
| Middle Atlantic..... | 5.4 | 18.6 | 65.3 | 10.8 | District of Columbia..... | 9.0 | 24.4 | 59.0 | 16.6 |
| West North Central..... | 5.4 | 17.8 | 65.1 | 11.7 | Virginia..... | 4.6 | 19.4 | 64.0 | 11.9 |
| West North Central..... | 4.2 | 12.4 | 75.1 | 8.3 | West Virginia..... | 3.9 | 22.8 | 64.2 | 9.0 |
| South Atlantic..... | 4.7 | 20.1 | 64.9 | 10.3 | North Carolina..... | 3.7 | 18.4 | 65.4 | 12.5 |
| East South Central..... | 5.2 | 18.3 | 60.2 | 16.2 | South Carolina..... | 3.9 | 20.9 | 68.1 | 7.1 |
| West South Central..... | 4.5 | 17.4 | 68.1 | 9.9 | Georgia..... | 5.1 | 19.8 | 66.4 | 8.7 |
| Mountain..... | 3.9 | 17.8 | 71.6 | 6.7 | Florida..... | 7.8 | 36.4 | 41.3 | 14.5 |
| Pacific..... | 4.9 | 20.4 | 65.4 | 9.3 | EAST SOUTH CENTRAL: | | | | |
| NEW ENGLAND: | | | | | Kentucky..... | 4.8 | 13.9 | 55.6 | 25.8 |
| Maine..... | 3.7 | 24.3 | 62.7 | 9.2 | Tennessee..... | 5.8 | 17.8 | 65.4 | 11.0 |
| New Hampshire..... | 2.8 | 24.3 | 65.8 | 7.1 | Alabama..... | 5.1 | 21.1 | 64.6 | 9.2 |
| Vermont..... | 4.7 | 25.9 | 58.2 | 8.3 | Mississippi..... | 5.3 | 27.3 | 53.7 | 13.6 |
| Massachusetts..... | 4.8 | 22.8 | 62.9 | 9.5 | WEST SOUTH CENTRAL: | | | | |
| Rhode Island..... | 4.4 | 22.8 | 65.3 | 7.5 | Arkansas..... | 5.3 | 29.5 | 53.9 | 11.3 |
| Connecticut..... | 6.0 | 25.6 | 59.8 | 8.6 | Louisiana..... | 4.4 | 15.4 | 66.1 | 13.1 |
| MIDDLE ATLANTIC: | | | | | Oklahoma..... | 4.3 | 15.3 | 72.3 | 8.0 |
| New York..... | 6.2 | 18.7 | 62.2 | 12.9 | Texas..... | 4.4 | 15.5 | 72.8 | 7.3 |
| New Jersey..... | 4.7 | 16.4 | 69.7 | 9.2 | MOUNTAIN: | | | | |
| Pennsylvania..... | 4.7 | 19.3 | 67.2 | 8.8 | Montana..... | 3.1 | 16.3 | 73.6 | 7.0 |
| EAST NORTH CENTRAL: | | | | | Idaho..... | 5.2 | 23.1 | 52.5 | 13.2 |
| Ohio..... | 5.6 | 19.1 | 64.2 | 11.0 | Wyoming..... | 5.6 | 37.2 | 48.6 | 10.6 |
| Indiana..... | 5.0 | 18.2 | 63.7 | 13.1 | Colorado..... | 4.9 | 17.4 | 70.2 | 7.5 |
| Illinois..... | 5.3 | 15.8 | 67.0 | 12.0 | New Mexico..... | 5.4 | 36.8 | 48.3 | 11.5 |
| Michigan..... | 5.9 | 20.1 | 62.3 | 11.6 | Arizona..... | 1.9 | 13.4 | 81.7 | 3.0 |
| Wisconsin..... | 4.9 | 17.9 | 65.9 | 11.4 | Utah..... | 3.6 | 15.5 | 76.1 | 4.8 |
| WEST NORTH CENTRAL: | | | | | Nevada..... | 3.4 | 17.9 | 75.5 | 3.2 |
| Minnesota..... | 4.1 | 12.6 | 74.9 | 8.4 | PACIFIC: | | | | |
| Iowa..... | 4.7 | 13.9 | 73.2 | 8.2 | Washington..... | 5.0 | 25.4 | 60.1 | 9.6 |
| Missouri..... | 5.6 | 15.5 | 67.9 | 11.1 | Oregon..... | 4.9 | 24.2 | 61.6 | 9.3 |
| North Dakota..... | 3.6 | 10.3 | 79.1 | 6.9 | California..... | 4.8 | 17.7 | 62.3 | 9.2 |
| South Dakota..... | 3.9 | 14.6 | 72.7 | 8.9 | | | | | |
| Nebraska..... | 3.0 | 7.6 | 82.3 | 7.1 | | | | | |
| Kansas..... | 2.4 | 8.5 | 84.7 | 4.4 | | | | | |

ENGINES AND POWER.

Summary for United States: 1909, 1904, and 1899.—The following table shows for all industries combined the number of engines or motors employed by manufacturing concerns and their horsepower at the censuses of 1909, 1904, and 1899. The figures for the total primary power used exclude duplications and represent the primary power of engines, water wheels, etc., owned by the manufacturing establishments

themselves plus the electric or other power rented from outside concerns. A separate presentation is made of the number and horsepower of electric motors operated by current generated within the establishments, which, of course, as it represents secondary power, is not included in the totals. This item plus the electric power rented makes up the total for electric power, which is shown separately.

Table 31

| POWER. | NUMBER OF ENGINES OR MOTORS. | | | HORSEPOWER. | | | PER CENT DISTRIBUTION OF HORSEPOWER. | | |
|--|------------------------------|----------------|-----------------------|-------------------|-------------------|-------------------|--------------------------------------|------------------|------------------|
| | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 |
| Primary power, total..... | 408,472 | 231,363 | 168,143 | 18,675,376 | 13,487,707 | 10,097,893 | 100.0 | 100.0 | 100.0 |
| Owned..... | 209,163 | 169,774 | 168,143 | 16,802,706 | 12,854,805 | 9,778,418 | 90.0 | 95.3 | 96.8 |
| Steam..... | 153,525 | 127,267 | 130,710 | 14,199,339 | 10,825,348 | 8,129,579 | 76.0 | 80.3 | 80.6 |
| Gas..... | 34,356 | 21,515 | 14,334 | 751,186 | 289,423 | 124,742 | 4.0 | 2.1 | 1.3 |
| Water wheels..... | 20,079 | 19,595 | 23,099 | 1,807,439 | 1,641,949 | 1,454,112 | 9.7 | 12.2 | 14.4 |
| Water motors..... | 1,203 | 1,397 | (¹) | 15,449 | 5,931 | (¹) | 0.1 | (²) | (¹) |
| Other..... | | | | 29,233 | 92,154 | 49,985 | 0.2 | 0.7 | 0.5 |
| Rented..... | 199,309 | 61,589 | (¹) | 1,872,670 | 632,902 | 319,475 | 10.0 | 4.7 | 3.2 |
| Electric..... | 199,309 | 61,589 | (¹) | 1,749,031 | 441,589 | 182,562 | 9.4 | 3.3 | 1.8 |
| Other..... | | | | 123,639 | 191,313 | 136,913 | 0.7 | 1.4 | 1.4 |
| Electric motors..... | 388,854 | 134,708 | 16,891 | 4,817,140 | 1,692,475 | 492,926 | 100.0 | 100.0 | 100.0 |
| Run by current generated by establishment..... | 189,545 | 73,119 | 16,891 | 3,068,109 | 1,150,886 | 310,374 | 63.7 | 72.2 | 63.0 |
| Run by rented power..... | 199,309 | 61,589 | (¹) | 1,749,031 | 441,589 | 182,562 | 36.3 | 27.7 | 37.0 |

¹ Not reported.² Less than one-tenth of 1 per cent.

The total horsepower of manufacturing establishments was 18,675,376 in 1909, as compared with 13,487,707 in 1904 and 10,097,893 in 1899. In 1909, 90 per cent of the horsepower was that of engines or

motors owned by the manufacturing establishments themselves, and 10 per cent was rented power, mostly electric. Especially striking is the increase in the use of gas engines and of electric power, both that rented

from outside concerns and that generated by the manufacturing concerns themselves. The total horsepower of electric motors in 1899, including both those operated by purchased current and those operated by current generated in the establishment, was 492,936; in 1909 it was 4,817,140, or nearly ten times as great. The practice of renting electric power is rapidly becoming more common among small establishments and even among large establishments, while the large concerns more and more tend to use electric motors

for the purpose of applying the power which they themselves generate.

The amount of water power owned by manufacturing establishments shows only a comparatively moderate rate of increase during the decade, but not a little of the electric power rented by manufacturers is generated in the first instance by utilizing water power.

Horsepower, by leading industries.—The following table shows, for the 43 leading industries, the amount of each of the several kinds of power used in 1909:

Table 32

| INDUSTRY. | Total horsepower (excluding duplication). | OWNED BY ESTABLISHMENTS REPORTING— | | | | | RENTED. | | ELECTRIC MOTORS. | |
|---|---|------------------------------------|--------------|---------------|---------------|--------|------------------|---------|---------------------|--|
| | | Steam engines. | Gas engines. | Water wheels. | Water motors. | Other. | Electric motors. | Other. | Total. ¹ | Run by current generated by establishment. |
| All industries..... | 18,875,376 | 14,199,339 | 751,186 | 1,807,439 | 15,449 | 29,293 | 1,749,031 | 123,639 | 4,817,140 | 3,068,109 |
| Agricultural implements..... | 100,601 | 71,394 | 4,433 | 8,387 | 3 | 500 | 15,684 | 200 | 38,905 | 23,221 |
| Automobiles, including bodies and parts..... | 75,550 | 39,325 | 7,000 | 287 | ..... | ..... | 27,641 | 1,297 | 41,829 | 14,188 |
| Boots and shoes, including cut stock and findings..... | 96,302 | 90,772 | 3,532 | 2,798 | 17 | ..... | 17,381 | 11,802 | 32,381 | 15,000 |
| Brass and bronze products..... | 106,120 | 78,101 | 4,800 | 3,370 | 4 | ..... | 18,399 | 1,356 | 33,462 | 15,063 |
| Bread and other bakery products..... | 65,298 | 25,500 | 8,106 | 251 | 83 | 3 | 31,160 | 120 | 30,795 | 8,635 |
| Butter, cheese, and condensed milk..... | 101,349 | 90,802 | 3,373 | 1,403 | 62 | 131 | 5,366 | 212 | 8,276 | 2,910 |
| Canning and preserving..... | 81,179 | 70,362 | 4,519 | 364 | 34 | 30 | 5,469 | 401 | 8,728 | 3,259 |
| Carriages and wagons and materials..... | 126,032 | 82,911 | 13,120 | 4,604 | 63 | 17 | 24,969 | 348 | 39,424 | 14,455 |
| Cars and general shop construction and repairs by steam-railroad companies..... | 203,361 | 254,942 | 3,140 | 133 | 312 | 808 | 33,786 | 145 | 161,238 | 127,502 |
| Cars, steam-railroad, not including operations of railroad companies..... | 97,797 | 89,123 | 1,148 | 370 | ..... | 700 | 6,456 | ..... | 61,060 | 54,604 |
| Chemicals..... | 208,604 | 103,273 | 1,147 | 10,913 | 153 | 215 | 92,057 | 846 | 150,699 | 64,642 |
| Clothing, men's, including shirts..... | 42,725 | 16,003 | 5,259 | 1,335 | 45 | 6 | 18,816 | 1,261 | 22,594 | 4,078 |
| Clothing, women's..... | 22,294 | 4,112 | 1,958 | 190 | 10 | ..... | 15,175 | 843 | 16,085 | 910 |
| Confectionery..... | 35,870 | 25,090 | 1,408 | ..... | 8 | 12 | 8,607 | 745 | 16,983 | 8,376 |
| Copper, tin, and sheet-iron products..... | 62,366 | 34,650 | 8,572 | 416 | 4 | 5 | 17,898 | 821 | 30,771 | 12,873 |
| Cotton goods, including cotton small wares..... | 1,296,517 | 869,838 | 2,812 | 302,288 | 736 | 7,363 | 108,612 | 4,908 | 235,902 | 127,390 |
| Electrical machinery, apparatus, and supplies..... | 158,768 | 90,883 | 6,753 | 1,078 | 36 | 14 | 50,045 | 959 | 104,540 | 114,495 |
| Flour-mill and gristmill products..... | 853,584 | 473,363 | 62,681 | 259,138 | 4,993 | 208 | 49,901 | 3,300 | 67,060 | 17,165 |
| Foundry and machine-shop products..... | 899,305 | 546,206 | 96,966 | 18,341 | 361 | 2,754 | 192,977 | 11,700 | 693,914 | 430,937 |
| Furniture and refrigerators..... | 121,451 | 184,425 | 5,830 | 6,743 | 105 | 612 | 20,420 | 3,316 | 43,252 | 22,832 |
| Gas, illuminating and heating..... | 228,350 | 115,332 | 7,128 | 2,755 | 59 | 182 | 2,723 | 171 | 17,336 | 14,613 |
| Hosiery and knit goods..... | 103,700 | 74,500 | 1,235 | 12,015 | 23 | 200 | 13,286 | 2,390 | 25,485 | 12,199 |
| Iron and steel, blast furnaces..... | 1,173,422 | 1,033,033 | 125,230 | 204 | 15 | ..... | 14,850 | ..... | 135,143 | 120,283 |
| Iron and steel, steel works and rolling mills..... | 2,100,978 | 1,955,346 | 79,391 | 5,829 | ..... | 1,500 | 58,797 | 115 | 716,000 | 657,812 |
| Leather goods..... | 28,148 | 10,028 | 1,381 | 1,337 | 36 | ..... | 14,046 | ..... | 16,663 | 10,663 |
| Leather, tanned, curried, and finished..... | 148,140 | 131,311 | 7,231 | 1,546 | 10 | 140 | 6,487 | 1,415 | 35,919 | 29,492 |
| Liquors, distilled..... | 40,120 | 44,623 | 3,321 | 252 | ..... | 160 | 708 | ..... | 3,786 | 3,078 |
| Liquors, malt..... | 347,720 | 330,705 | 1,261 | 110 | 224 | 1,065 | 14,190 | 166 | 66,519 | 52,339 |
| Lumber and timber products..... | 2,840,082 | 2,587,487 | 38,028 | 139,392 | 1,111 | 836 | 62,200 | 10,428 | 130,707 | 68,507 |
| Marble and stone work..... | 187,690 | 132,236 | 10,874 | 9,451 | 167 | 241 | 32,002 | 2,655 | 53,748 | 21,686 |
| Oil, cottonseed, and cake..... | 192,842 | 183,440 | 1,674 | 125 | 50 | 189 | 6,394 | 470 | 10,855 | 4,461 |
| Paint and varnish..... | 56,162 | 42,165 | 3,290 | 2,004 | 2 | 25 | 7,814 | 801 | 17,037 | 9,223 |
| Paper and wood pulp..... | 1,804,265 | 469,089 | 6,675 | 785,961 | 2,185 | 275 | 38,610 | 1,470 | 130,120 | 91,510 |
| Patent medicines and compounds and druggists' preparations..... | 25,659 | 15,938 | 1,712 | 250 | 14 | 121 | 6,882 | 742 | 11,175 | 4,283 |
| Petroleum, refining..... | 90,268 | 83,707 | 5,870 | ..... | ..... | 378 | 28 | 285 | 8,808 | 8,780 |
| Printing and publishing..... | 297,763 | 59,240 | 32,152 | 600 | 1,720 | 94 | 197,692 | 6,265 | 229,312 | 31,630 |
| Silk and silk goods, including throwsters..... | 97,947 | 72,059 | 1,277 | 8,383 | ..... | ..... | 10,354 | 5,874 | 23,758 | 13,404 |
| Slaughtering and meat packing..... | 208,707 | 190,636 | 2,208 | 30 | 16 | 30 | 15,047 | 740 | 78,677 | 63,680 |
| Smelting and refining, copper..... | 158,126 | 114,862 | 1,107 | 12,725 | ..... | 19 | 20,413 | ..... | 55,229 | 25,816 |
| Smelting and refining, lead..... | 20,954 | 23,090 | 35 | ..... | ..... | ..... | 3,829 | ..... | 12,166 | 8,337 |
| Sugar and molasses, not including beet sugar..... | 160,603 | 158,682 | 395 | ..... | ..... | 210 | 1,316 | ..... | 18,780 | 17,414 |
| Tobacco manufactures..... | 28,514 | 21,929 | 795 | 243 | 2 | 7 | 5,307 | 171 | 11,203 | 5,836 |
| Woolen, worsted, and felt goods, and wool hats..... | 362,209 | 261,364 | 2,077 | 78,009 | 341 | ..... | 13,783 | 5,735 | 79,223 | 65,440 |
| All other industries..... | 3,646,423 | 2,868,395 | 172,532 | 122,808 | 2,439 | 10,103 | 431,534 | 38,552 | 1,085,078 | 654,144 |

¹ Includes the horsepower of motors run by rented current and also of those run by current generated by the establishment.

This table shows very wide differences among the industries with respect to the relative importance of the several kinds of power. These differences are due partly to differences in the geographic location of the industries, which affect the character of power available, and partly to differences in the character of machinery used, which affect the adaptability of the different kinds of power.

The power developed by the use of gas engines represents a larger proportion of the total power employed in establishments engaged in the manu-

facture of carriages and wagons, flour mills and grist-mills, foundries and machine shops, blast furnaces, steel works and rolling mills, lumber mills, and printing and publishing establishments than in any of the other industries listed. The largest absolute amount of power derived from gas engines is reported for the blast furnaces, and the next largest for the foundries and machine shops.

A very large proportion of the total power derived from water wheels is used in four industries, namely, the manufacture of cotton goods, flour mills and grist-

mills, the lumber and timber products industry, and the manufacture of paper and wood pulp. In the last-mentioned industry the horsepower developed by water wheels amounts to 785,961, about 60 per cent of the total power used in that industry.

The extent to which electric motors are utilized in applying the power employed varies considerably in the different industries. In a considerable number of industries the electric power, including that generated by the manufacturing establishments themselves and that rented from other concerns, is equal to more than one-half of the total primary power. These industries are the manufacture of automobiles, bread and other bakery products, the construction of steam-railroad cars, the repair shops of steam-railroad companies, the chemical industry, the making of men's and of women's clothing, the manufacture of electrical machinery, apparatus, and supplies, the foundry and machine-shop industry, the manufacture of leather goods, and the printing and publishing industry. In the electrical-machinery industry the horsepower of electric motors installed is greater than the total primary power; this may be accounted for by reason of the provision of motors for the operation of machinery which is not in constant use. The largest absolute amount of electric power is reported by the steel works and rolling mills, and the next largest, by the foundries and machine shops. In the former the electric power is equal to a little over one-third of the total amount of primary power and in the latter to nearly three-fourths.

Horsepower, by states: 1909.—Table 33 shows, by states grouped according to geographic divisions, the amount of each of the several kinds of power used in manufacturing industries in 1909.

The rank of the states with respect to the amount of power used in manufacturing industries is somewhat different from that with respect to value of products and other leading items in the statistics of manufactures. Although New York ranks first among the states in most of the leading items, Pennsylvania outranks it in respect to the amount of power used in manufacturing industries. New York stands second, Ohio third, Massachusetts fourth, and Illinois fifth. The relative total amount of power used is largely dependent upon the character of the industries predominant in each division or state. The relative extent to which the different kinds of power are used in the several divisions and states is also dependent in part upon the character of the industries and in part upon the situation of each state with reference to supplies of coal, petroleum, and gas, and with reference to the availability of water power.

In every division—in fact in every state, except Maine and Vermont—steam engines are the most important source of power. The proportion which power generated by gas engines represents of the total power

is larger in the East North Central division than in any other division, partly on account of the proximity of gas wells. The Middle Atlantic states rank next in the proportion of the total power which is developed by gas engines. With respect to power obtained from water wheels owned by the manufacturing establishments, New England ranks far ahead of the other divisions both in the absolute amount of power and in the proportion which water power represents of the total. More than two-fifths of the total power derived from water wheels owned by manufacturing establishments is found in New England, and more than one-fourth of the total power utilized by the factories of New England is derived from water wheels. The Middle Atlantic division ranks next in this respect. The largest absolute amounts of power utilized by means of electric motors (including both those operated by purchased current and those operated by current generated in the establishment) are reported from the Middle Atlantic division, the East North Central division, and New England, in the order named, and in these three divisions also the proportion which electric power represents of the total is unusually large, no very great difference appearing among the three divisions in this respect. The proportion of electric power is also high in the Mountain, Pacific, and West North Central divisions.

The individual states which lead in the use of gas engines to develop power are Pennsylvania, Indiana, Ohio, New York, Illinois, Kansas, and New Jersey, in the order named. The absolute amount of power of this character is greatest in Pennsylvania, and the proportion which such power represents of the total power used is greatest in Indiana. The power derived from water wheels owned by manufacturing establishments is greater in New York than in any other state, but the proportion which such power represents of the total power is greatest in Maine. Other leading states in respect to the absolute amount of such water power are Massachusetts, Wisconsin, New Hampshire, Vermont, Connecticut, Minnesota, Pennsylvania, Oregon, Virginia, North Carolina, and Michigan; the leading states in respect to the proportion which it represents of the total power are Vermont, New Hampshire, Oregon, Wisconsin, New York, Minnesota, Connecticut, Massachusetts, Virginia, and Montana.

In the absolute amount of electric power utilized for manufacturing, Pennsylvania leads and is followed by New York, Ohio, Massachusetts, Illinois, Indiana, and New Jersey, in the order named. With respect to the proportion which electric power represents of the total Nevada ranks first, and is followed by California, Utah, Illinois, New York, Montana, Arizona, Indiana, and Massachusetts in the order named. In Nevada the power of electric motors forms 54.1 per cent and in California 40.3 per cent of the total power reported for these states.

ABSTRACT OF THE CENSUS—MANUFACTURES.

Table 33

| DIVISION AND STATE. | Total horse- power (excluding duplica- tion). | OWNED BY ESTABLISHMENTS REPORTING— | | | | | RENTED. | | ELECTRIC MOTORS. | |
|---------------------------|--|------------------------------------|-----------------|------------------|------------------|--------|---------------------|---------|---------------------|--|
| | | Steam engines. | Gas engines. | Water wheels. | Water motors. | Other. | Electric motors. | Other. | Total. ¹ | Run by current generated by estab- lishment. |
| United States..... | 18,075,376 | 14,199,339 | 751,186 | 1,807,439 | 15,449 | 29,293 | 1,749,031 | 123,639 | 4,817,140 | 3,068,109 |
| GEOGRAPHIC DIVISIONS: | | | | | | | | | | |
| New England..... | 2,715,121 | 1,656,911 | 41,801 | 753,920 | 3,412 | 2,055 | 218,642 | 38,380 | 663,143 | 444,501 |
| Middle Atlantic..... | 5,531,502 | 4,151,062 | 274,274 | 466,541 | 3,947 | 11,736 | 568,723 | 54,619 | 1,737,236 | 1,168,513 |
| East North Central..... | 4,382,070 | 3,491,418 | 283,450 | 206,393 | 2,048 | 4,766 | 375,876 | 18,110 | 1,297,447 | 921,571 |
| West North Central..... | 1,101,990 | 838,988 | 57,434 | 82,791 | 3,539 | 939 | 115,002 | 3,297 | 266,534 | 151,532 |
| South Atlantic..... | 1,832,001 | 1,431,423 | 36,441 | 182,076 | 1,082 | 5,321 | 171,140 | 4,512 | 343,393 | 172,247 |
| East South Central..... | 1,036,560 | 953,511 | 12,270 | 29,040 | 275 | 1,600 | 38,580 | 1,104 | 108,400 | 69,829 |
| West South Central..... | 873,350 | 805,640 | 29,291 | 3,060 | 48 | 2,513 | 31,807 | 991 | 78,893 | 47,086 |
| Mountain..... | 400,766 | 306,786 | 4,188 | 21,345 | 198 | 224 | 66,956 | 1,069 | 113,984 | 47,028 |
| Pacific..... | 802,016 | 563,000 | 12,037 | 62,273 | 900 | 49 | 162,299 | 1,458 | 208,101 | 45,802 |
| NEW ENGLAND: | | | | | | | | | | |
| Maine..... | 459,599 | 168,595 | 3,933 | 250,480 | 1,912 | 179 | 27,203 | 1,297 | 54,266 | 27,063 |
| New Hampshire..... | 293,991 | 139,128 | 1,238 | 127,490 | 521 | 30 | 21,209 | 4,375 | 45,351 | 24,142 |
| Vermont..... | 159,445 | 64,252 | 2,160 | 78,881 | 181 | 415 | 12,917 | 639 | 21,233 | 8,316 |
| Massachusetts..... | 1,175,071 | 834,701 | 18,326 | 185,996 | 520 | 895 | 109,996 | 24,037 | 402,492 | 292,496 |
| Rhode Island..... | 226,740 | 175,293 | 3,300 | 31,376 | 41 | 39 | 13,697 | 2,994 | 42,130 | 28,433 |
| Connecticut..... | 400,275 | 274,942 | 12,844 | 73,697 | 237 | 497 | 33,620 | 4,438 | 97,671 | 64,051 |
| MIDDLE ATLANTIC: | | | | | | | | | | |
| New York..... | 1,997,602 | 1,080,877 | 99,899 | 394,221 | 1,397 | 3,583 | 389,945 | 27,740 | 689,976 | 300,031 |
| New Jersey..... | 612,293 | 529,068 | 20,867 | 18,553 | 1,118 | 180 | 33,157 | 8,745 | 182,475 | 149,318 |
| Pennsylvania..... | 2,921,547 | 2,541,117 | 153,508 | 53,762 | 1,432 | 7,973 | 145,621 | 18,134 | 864,785 | 719,164 |
| EAST NORTH CENTRAL: | | | | | | | | | | |
| Ohio..... | 1,583,155 | 1,362,134 | 103,801 | 15,777 | 330 | 1,586 | 93,592 | 5,935 | 417,844 | 324,252 |
| Indiana..... | 633,377 | 448,528 | 109,105 | 7,440 | 447 | 599 | 65,548 | 1,704 | 233,193 | 167,645 |
| Illinois..... | 1,013,071 | 838,199 | 37,025 | 12,178 | 513 | 1,433 | 117,007 | 6,716 | 398,621 | 281,614 |
| Michigan..... | 598,288 | 405,520 | 13,988 | 41,442 | 577 | 16 | 74,270 | 2,475 | 133,064 | 58,794 |
| Wisconsin..... | 554,179 | 377,037 | 19,531 | 129,550 | 181 | 1,132 | 25,459 | 1,289 | 114,725 | 89,268 |
| WEST NORTH CENTRAL: | | | | | | | | | | |
| Minnesota..... | 297,670 | 199,777 | 7,174 | 56,631 | 2,939 | 25 | 30,297 | 827 | 52,212 | 21,915 |
| Iowa..... | 155,384 | 121,882 | 8,025 | 6,326 | 85 | 147 | 18,463 | 456 | 40,736 | 22,273 |
| Missouri..... | 340,467 | 280,489 | 11,159 | 3,532 | 206 | 5 | 44,050 | 1,020 | 106,941 | 62,885 |
| North Dakota..... | 13,196 | 10,170 | 1,304 | 530 | ..... | ..... | 1,104 | 28 | 1,698 | 534 |
| South Dakota..... | 17,666 | 12,257 | 2,784 | 927 | 12 | ..... | 1,083 | 3 | 2,084 | 401 |
| Nebraska..... | 64,466 | 44,806 | 4,408 | 7,361 | 75 | 76 | 7,530 | 210 | 15,942 | 8,412 |
| Kansas..... | 213,141 | 169,607 | 22,580 | 7,484 | 222 | 686 | 11,809 | 753 | 46,921 | 35,112 |
| SOUTH ATLANTIC: | | | | | | | | | | |
| Delaware..... | 52,779 | 42,266 | 766 | 5,183 | 12 | ..... | 4,502 | 50 | 17,910 | 13,408 |
| Maryland..... | 218,244 | 181,326 | 5,736 | 11,953 | 121 | 1,069 | 17,108 | 931 | 44,921 | 27,813 |
| District of Columbia..... | 16,503 | 12,169 | 1,073 | 775 | ..... | 43 | 2,433 | 70 | 4,527 | 2,094 |
| Virginia..... | 283,928 | 221,303 | 3,664 | 45,122 | 33 | 38 | 13,356 | 412 | 42,043 | 28,687 |
| West Virginia..... | 217,490 | 184,591 | 16,705 | 10,546 | 71 | ..... | 5,330 | 253 | 28,543 | 23,213 |
| North Carolina..... | 378,556 | 271,944 | 2,356 | 41,619 | 307 | 1,035 | 60,044 | 1,251 | 86,002 | 25,958 |
| South Carolina..... | 276,378 | 193,052 | 1,264 | 38,422 | 75 | 2,400 | 41,130 | 35 | 67,620 | 26,490 |
| Georgia..... | 208,241 | 240,264 | 3,380 | 28,288 | 460 | 536 | 23,890 | 1,423 | 44,264 | 20,374 |
| Florida..... | 89,816 | 84,508 | 1,497 | 168 | 3 | 200 | 3,353 | 87 | 7,563 | 4,210 |
| EAST SOUTH CENTRAL: | | | | | | | | | | |
| Kentucky..... | 230,224 | 207,591 | 4,724 | 5,320 | 57 | 915 | 11,314 | 303 | 31,268 | 19,954 |
| Tennessee..... | 242,277 | 215,338 | 1,853 | 9,670 | 107 | 4 | 14,666 | 639 | 29,580 | 14,920 |
| Alabama..... | 357,837 | 328,275 | 4,616 | 13,812 | 111 | 732 | 10,104 | 187 | 39,928 | 29,824 |
| Mississippi..... | 206,222 | 202,307 | 1,077 | 238 | ..... | 39 | 2,496 | 65 | 7,627 | 5,131 |
| WEST SOUTH CENTRAL: | | | | | | | | | | |
| Arkansas..... | 173,088 | 168,152 | 1,374 | 639 | 35 | 52 | 2,581 | 255 | 7,417 | 4,836 |
| Louisiana..... | 346,652 | 331,370 | 3,496 | ..... | 10 | 2,401 | 9,077 | 233 | 27,139 | 13,062 |
| Oklahoma..... | 71,139 | 56,643 | 8,676 | 470 | 2 | ..... | 5,281 | 67 | 7,887 | 2,606 |
| Texas..... | 282,471 | 249,475 | 15,745 | 1,886 | 1 | 60 | 14,868 | 436 | 36,450 | 21,532 |
| MOUNTAIN: | | | | | | | | | | |
| Montana..... | 90,402 | 49,654 | 223 | 13,583 | 63 | ..... | 26,504 | 375 | 27,301 | 797 |
| Idaho..... | 42,804 | 35,529 | 242 | 2,403 | 4 | ..... | 4,606 | 20 | 8,409 | 3,803 |
| Wyoming..... | 7,628 | 6,467 | 182 | 456 | 9 | ..... | 514 | ..... | 801 | 287 |
| Colorado..... | 154,615 | 135,645 | 1,464 | 1,377 | 49 | 105 | 15,874 | 101 | 35,944 | 20,070 |
| New Mexico..... | 15,465 | 11,781 | 305 | 74 | ..... | ..... | 3,245 | ..... | 4,586 | 1,341 |
| Arizona..... | 39,140 | 34,193 | 1,285 | 129 | ..... | 19 | 3,314 | 200 | 15,100 | 11,788 |
| Utah..... | 42,947 | 28,984 | 226 | 2,926 | 71 | 100 | 10,592 | 48 | 15,402 | 4,810 |
| Nevada..... | 7,765 | 4,533 | 201 | 397 | 2 | ..... | 2,307 | 325 | 6,441 | 4,134 |
| PACIFIC: | | | | | | | | | | |
| Washington..... | 297,897 | 257,230 | 1,494 | 7,842 | 223 | 19 | 30,951 | 138 | 43,615 | 12,664 |
| Oregon..... | 175,019 | 112,244 | 428 | 47,041 | 397 | ..... | 14,811 | 98 | 20,802 | 5,991 |
| California..... | 329,100 | 193,526 | 10,115 | 7,390 | 280 | 30 | 116,537 | 1,222 | 143,684 | 27,147 |

¹ Includes the horsepower of motors run by rented current and also of those run by current generated by the establishment.

SUPPLEMENTARY DATA REGARDING IMPORTANT INDUSTRIES.

(With statistics for laundries and custom sawmills and gristmills.)

For certain industries the Census Bureau collects, by means of special schedules, details regarding the quantity and value of materials and products and other information for securing which no provision is made on the general schedule. Data of this character are here presented for a number of important industries. As far as possible the statistics are grouped according to the character of the finished products. The statistics in each table relate to the United States as a whole, not including Alaska, Hawaii, Porto Rico, or other outlying possessions.

FOOD AND KINDRED PRODUCTS.

Butter, cheese, and condensed milk.—The following table presents statistics for the butter, cheese, and condensed-milk industry. The figures cover only the manufacture of the factory products. The statistics for this class of products made on farms are not avail-

able for 1909; in 1899, however, 1,071,626,056 pounds of butter and 16,372,318 pounds of cheese were made on farms, of which 518,042,767 pounds of butter and 14,692,542 pounds of cheese were sold.

The value of the factory products of this industry more than doubled during the period 1899-1909. Condensed milk, for which the ratio of increase was highest, nearly trebled in value, while butter more than doubled. Since 1899 the increase in prices has been quite pronounced in this industry, as shown by the fact that the butter product increased 113.5 per cent in value and only 48.7 per cent in quantity, and the output of cheese 63 per cent in value and only 10.3 per cent in quantity. As shown by the note to the table, considerable quantities of butter, cheese, and condensed milk were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

| Table 34 | 1909 | 1904 | 1899 | | 1909 | 1904 | 1899 |
|---------------------------------|----------------------|----------------------|----------------------|--|--------------------|--------------------|------------------|
| MATERIALS. | | | | PRODUCTS—continued. | | | |
| Total cost..... | \$235,546,084 | \$142,920,277 | \$108,841,200 | Cheese—Continued. | | | |
| Milk: | | | | Skimmed— | | | |
| Pounds..... | 9,888,727,303 | 12,147,304,550 | 11,678,082,821 | Pounds..... | 7,770,812 | 3,459,582 | (1) |
| Cost..... | \$118,675,613 | \$99,729,745 | \$91,256,436 | Value..... | \$429,519 | \$148,568 | (1) |
| Cream: | | | | Other kinds— | | | |
| Pounds..... | 1,406,143,908 | 588,186,471 | 203,673,958 | Pounds..... | 5,441,739 | 74,662,656 | 56,196,219 |
| Cost..... | \$95,025,507 | \$28,371,040 | \$8,154,068 | Value..... | \$605,332 | \$6,438,339 | \$3,156,332 |
| Skimmed milk: | | | | Condensed milk: | | | |
| Pounds..... | 56,974,760 | 36,071,335 | (1) | Pounds..... | 494,796,544 | 308,495,182 | 186,921,787 |
| Cost..... | \$110,469 | \$59,398 | (1) | Value..... | \$33,563,129 | \$29,149,282 | \$11,888,792 |
| Sugar: | | | | Sweetened— | | | |
| Pounds..... | 78,457,978 | 67,810,031 | 50,873,859 | Pounds..... | 214,518,319 | 196,255,189 | (1) |
| Cost..... | \$3,674,174 | \$3,315,892 | \$2,689,687 | Value..... | \$17,345,278 | \$12,478,376 | (1) |
| All other materials..... | \$18,060,301 | \$11,444,202 | \$6,841,009 | Unsweetened— | | | |
| PRODUCTS. | | | | Pounds..... | 280,278,234 | 110,129,963 | (1) |
| Total value..... | \$274,557,718 | \$168,182,789 | \$130,783,349 | Value..... | \$16,217,851 | \$6,679,906 | (1) |
| Butter: | | | | Cream sold: | | | |
| Pounds..... | 624,764,653 | 531,478,141 | 420,126,546 | Pounds..... | \$1,211,374 | 28,131,914 | 61,764,532 |
| Value..... | \$179,510,619 | \$113,189,453 | \$84,079,754 | Value..... | \$9,528,972 | \$2,364,497 | \$4,435,444 |
| Packed solid— | | | | Skimmed milk sold: | | | |
| Pounds..... | 410,692,616 | 364,432,996 | 328,956,590 | Pounds..... | 352,594,574 | 1,161,414,457 | 2,263,494,156 |
| Value..... | \$115,098,056 | \$74,483,306 | \$63,961,893 | Value..... | \$629,135 | \$1,398,738 | \$2,531,460 |
| Prints and rolls— | | | | Casein dried from skimmed milk: | | | |
| Pounds..... | 214,072,037 | 167,045,145 | 91,169,956 | Pounds..... | 13,018,298 | 11,581,874 | 12,298,405 |
| Value..... | \$64,412,563 | \$38,706,147 | \$20,117,861 | Value..... | \$795,544 | \$554,099 | \$385,581 |
| Cheese: | | | | All other products..... | \$8,990,395 | \$1,945,050 | \$944,489 |
| Pounds..... | 311,126,317 | 317,144,872 | 281,972,324 | EQUIPMENT. | | | |
| Value..... | \$43,239,924 | \$28,611,760 | \$26,519,829 | Cream separators, number..... | 5,624 | 8,842 | 9,791 |
| Full cream— | | | | | | | |
| Pounds..... | 287,110,383 | 239,652,634 | 225,776,105 | | | | |
| Value..... | \$40,817,073 | \$22,024,853 | \$21,363,477 | | | | |
| Part cream— | | | | | | | |
| Pounds..... | 10,803,392 | | | | | | |
| Value..... | \$1,188,000 | | | | | | |

¹ Not reported separately.

² In addition, 2,381,212 pounds of butter, to the value of \$664,171; 49,413 pounds of part cream cheese, to the value of \$5,745; 491,300 pounds of condensed milk, to the value of \$24,078; and other dairy products to the value of \$25,388 were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

³ In addition, 1,971,120 pounds of butter, to the value of \$448,729, and other dairy products to the value of \$71,588 were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

Canning and preserving.—Table 35 includes statistics for establishments engaged in the various branches of the canning industry and also for those manufacturing pickles, preserves, and sauces. The table does not include meats and other products canned in slaughtering and meat-packing establishments (see Table 38).

The total value of all classes of products of canning and preserving establishments in 1909 was \$157,101,201 and in 1899, \$99,335,464, the increase for the decade being 58.2 per cent.

Of the two groups of products listed separately in the table, fruits and vegetables show the largest ratio of increase in value from 1899 to 1909, 88.3

per cent. Fish and oysters show an increase of 47 per cent.

The statistics for dried fruits cover the product of fruit drying and packing establishments which buy the fruit or do drying and packing for others, and of cooperative associations, but do not include fruits dried by the grower on the farm. The bulk of the product is from California, the value of the factory dried-fruit product of that state in 1909 being \$16,137,716, or 81.3 per cent of the total value of this class of products.

| Table 35 | PRODUCT. | 1909 | 1904 | 1899 |
|----------|-------------------------------|----------------------|----------------------|---------------------|
| | Total value..... | \$157,101,201 | \$130,465,976 | \$99,335,464 |
| | <i>Fruits and vegetables.</i> | | | |
| | Value..... | \$84,347,783 | \$72,998,756 | \$44,802,665 |
| | Canned vegetables: | | | |
| | Cases..... | 32,752,409 | 29,579,616 | 19,323,730 |
| | Value..... | \$51,508,914 | \$45,610,903 | \$28,734,598 |
| | Tomatoes— | | | |
| | Cases..... | 12,909,986 | 9,411,084 | 8,700,538 |
| | Value..... | \$18,747,941 | \$14,020,846 | \$13,666,560 |
| | Corn— | | | |
| | Cases..... | 7,451,265 | 11,200,597 | 6,330,984 |
| | Value..... | \$10,332,130 | \$15,952,380 | \$8,191,383 |
| | Peas— | | | |
| | Cases..... | 5,901,703 | 4,694,492 | 2,513,722 |
| | Value..... | \$10,247,363 | \$7,928,701 | \$4,466,673 |
| | Beans— | | | |
| | Cases..... | 3,392,804 | 2,588,015 | 1,493,517 |
| | Value..... | \$6,013,098 | \$4,133,810 | \$2,025,123 |
| | Asparagus— | | | |
| | Cases..... | 228,550 | (³) | (³) |
| | Value..... | \$1,076,775 | (³) | (³) |
| | Pumpkins— | | | |
| | Cases..... | 440,303 | 246,557 | 138,078 |
| | Value..... | \$570,043 | \$340,497 | \$202,404 |
| | Sweet potatoes— | | | |
| | Cases..... | 347,286 | 192,997 | 83,526 |
| | Value..... | \$531,651 | \$284,395 | \$124,245 |
| | All other— | | | |
| | Cases..... | 2,080,503 | 1,236,874 | 27,365 |
| | Value..... | \$3,144,907 | \$2,944,278 | \$59,210 |
| | Canned fruits: | | | |
| | Cases..... | 5,501,404 | 4,628,241 | 4,467,817 |
| | Value..... | \$12,938,474 | \$11,722,979 | \$11,311,062 |
| | Peaches— | | | |
| | Cases..... | 1,467,213 | 1,304,867 | 1,449,356 |
| | Value..... | \$3,753,098 | \$3,902,441 | \$4,283,165 |
| | Apples— | | | |
| | Cases..... | 1,205,724 | 490,341 | 645,762 |
| | Value..... | \$1,898,720 | \$738,013 | \$1,125,119 |
| | Apricots— | | | |
| | Cases..... | 630,185 | 539,815 | 531,048 |
| | Value..... | \$1,825,311 | \$1,041,019 | \$1,583,262 |
| | Pears— | | | |
| | Cases..... | 637,782 | 789,120 | 672,485 |
| | Value..... | \$1,833,214 | \$2,192,010 | \$2,188,201 |
| | Berries— | | | |
| | Cases..... | 815,851 | 489,637 | 600,419 |
| | Value..... | \$1,754,927 | \$1,058,659 | \$1,092,975 |
| | Cherries— | | | |
| | Cases..... | 390,351 | 319,350 | 114,367 |
| | Value..... | \$1,019,013 | \$825,522 | \$307,788 |
| | All other— | | | |
| | Cases..... | 354,280 | 695,111 | 453,780 |
| | Value..... | \$853,501 | \$1,363,515 | \$730,592 |
| | Dried fruits: | | | |
| | Pounds..... | 400,328,767 | 343,579,623 | 85,439,406 |
| | Value..... | \$19,840,395 | \$15,664,784 | \$4,757,005 |
| | Raisins— | | | |
| | Pounds..... | 111,774,767 | 121,409,881 | 14,984,221 |
| | Value..... | \$4,837,933 | \$6,349,381 | \$1,062,268 |
| | Prunes— | | | |
| | Pounds..... | 188,498,490 | 117,808,181 | 25,413,793 |
| | Value..... | \$5,130,412 | \$3,290,628 | \$970,927 |
| | Apples— | | | |
| | Pounds..... | 44,568,244 | 40,737,089 | 33,212,309 |
| | Value..... | \$3,098,095 | \$1,758,610 | \$1,906,642 |
| | Peaches— | | | |
| | Pounds..... | 46,843,391 | 25,861,074 | 5,062,390 |
| | Value..... | \$2,423,083 | \$1,702,205 | \$312,495 |
| | Apricots— | | | |
| | Pounds..... | 29,205,569 | 19,559,573 | 5,465,217 |
| | Value..... | \$2,277,177 | \$1,410,838 | \$455,394 |
| | All other— | | | |
| | Pounds..... | 29,438,300 | 18,203,825 | 701,509 |
| | Value..... | \$2,073,695 | \$1,144,122 | \$49,276 |

| Table 35— Cont'd. | PRODUCT. | 1909 | 1904 | 1899 |
|----------------------|--|--------------|--------------|------------------|
| | <i>Fish and oysters.</i> | | | |
| | Value..... | \$27,648,289 | \$22,194,635 | \$18,807,542 |
| | Canned fish and oysters: | | | |
| | Pounds..... | 235,418,713 | 207,077,976 | 173,531,786 |
| | Value..... | \$17,573,311 | \$13,531,786 | \$12,868,572 |
| | Salmon— | | | |
| | Pounds..... | 99,831,528 | 48,128,926 | 62,652,792 |
| | Value..... | \$8,723,565 | \$4,251,387 | \$5,679,324 |
| | Sardines: | | | |
| | Pounds..... | 90,694,284 | 87,224,524 | 44,951,244 |
| | Value..... | \$4,931,831 | \$4,380,498 | \$4,212,351 |
| | Oysters— | | | |
| | Pounds..... | 28,192,392 | 59,249,043 | (⁴) |
| | Value..... | \$2,443,101 | \$3,799,412 | \$2,054,800 |
| | All other— | | | |
| | Pounds..... | 16,700,509 | 12,475,483 | 9,625,825 |
| | Value..... | \$1,474,814 | \$1,100,489 | \$922,097 |
| | Smoked fish: | | | |
| | Pounds..... | 39,814,989 | 36,617,904 | 21,108,066 |
| | Value..... | \$2,900,417 | \$2,528,240 | \$957,741 |
| | Herring— | | | |
| | Pounds..... | 21,369,856 | 19,737,537 | 12,576,429 |
| | Value..... | \$931,611 | \$631,352 | \$350,590 |
| | Salmon— | | | |
| | Pounds..... | 6,836,099 | 6,833,560 | 1,975,647 |
| | Value..... | \$950,540 | \$831,184 | \$150,331 |
| | Finnan haddock— | | | |
| | Pounds..... | 4,513,222 | 3,014,160 | 1,360,500 |
| | Value..... | \$304,620 | \$174,234 | \$75,390 |
| | All other— | | | |
| | Pounds..... | 7,095,812 | 7,032,647 | 5,195,490 |
| | Value..... | \$713,646 | \$591,470 | \$415,460 |
| | Salted fish: | | | |
| | Pounds..... | 128,539,299 | 111,728,665 | 117,780,031 |
| | Value..... | \$7,174,561 | \$6,134,609 | \$4,981,229 |
| | Cod— | | | |
| | Pounds..... | 40,404,338 | 48,757,819 | 64,731,210 |
| | Value..... | \$3,077,612 | \$3,013,320 | \$5,081,045 |
| | Mackerel— | | | |
| | Pounds..... | 9,045,469 | 8,326,566 | 10,458,313 |
| | Value..... | \$740,513 | \$678,326 | \$602,008 |
| | Herring— | | | |
| | Pounds..... | 21,718,467 | 15,824,192 | 13,933,426 |
| | Value..... | \$461,287 | \$409,223 | \$332,220 |
| | Haddock— | | | |
| | Pounds..... | 7,873,156 | 4,737,975 | 6,927,919 |
| | Value..... | \$319,248 | \$213,394 | \$197,390 |
| | All other— | | | |
| | Pounds..... | 40,407,869 | 34,082,113 | 21,729,163 |
| | Value..... | \$2,575,901 | \$1,820,346 | \$708,596 |
| | <i>All other products, including pickles, preserves, and sauces.</i> | | | |
| | Value..... | \$45,105,120 | \$35,272,585 | \$35,725,257 |

¹ In addition, products to the value of \$5,423,190 were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation, as follows:

| | Number. | Value. |
|-------------------------------------|--------------------|-------------|
| Total..... | | \$5,423,190 |
| Canned vegetables..... | cases.. 709,017 | 1,714,009 |
| Canned fruits..... | cases.. 27,474 | 76,964 |
| Dried fruits..... | pounds.. 1,007,033 | 53,159 |
| Canned fish..... | pounds.. 531,054 | 19,649 |
| Smoked fish..... | pounds.. 924,785 | 58,841 |
| Salted fish..... | pounds.. 4,690,322 | 143,640 |
| Pickles, preserves, and sauces..... | pounds.. | 8,376,137 |

² In addition, 140,203 cases of fruits and vegetables, to the value of \$288,138; 1,847,625 pounds of fish, to the value of \$274,403; and oysters, to the value of \$12,900, were canned and preserved by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

³ Not reported separately.

⁴ Not reported.

Flour and grist mill products.—Table 36 presents statistics for flour mills and gristmills, but does not include data for establishments engaged exclusively in custom grinding (see table on p. 513). The total quantity of all kinds of grain milled in 1909 was 806,247,961 bushels, as compared with 729,061,820 bushels in 1899, an increase of 10.6 per cent. The largest increases were in wheat and corn,

the former showing a gain of about 25,000,000 bushels and the latter a gain of about 29,000,000 bushels.

The increase in the value of all products of flour mills and gristmills for the period 1899-1909 was 76.2 per cent. This gain was due mainly to advances in price, for the increases in quantity were relatively much smaller. The value of the wheat flour produced increased 64.7 per cent, but its quantity only 6 per cent, while the production of rye flour increased 54 per cent in value and only 6.2 per cent in quantity. The figures in the table indicate that higher unit values prevailed for all classes of products during 1909 than during the two prior census years. For the decade as a whole the percentage of increase in cost of materials, which constitutes by far the greater part of the value of products, was, however, even higher than that in value of products.

| Table 36 | 1909 | 1904 | 1899 |
|---|---------------|---------------|---------------|
| MATERIALS. | | | |
| Total cost..... | \$767,576,479 | \$619,971,161 | \$428,116,757 |
| Grain ground or milled, bushels..... | 806,247,961 | 754,945,729 | 729,061,820 |
| Wheat..... | 496,480,314 | 494,065,083 | 471,306,086 |
| Corn..... | 209,281,237 | 178,217,321 | 190,573,076 |
| Rye..... | 11,503,909 | 11,480,370 | 10,088,381 |
| Buckwheat..... | 7,156,062 | 6,631,395 | 5,490,156 |
| Barley..... | 24,509,770 | 18,628,562 | 10,067,348 |
| Oats..... | 50,241,598 | 45,381,069 | 47,175,766 |
| Other..... | 7,076,011 | 612,099 | 4,369,107 |
| PRODUCTS. | | | |
| Total value..... | \$883,584,405 | \$713,033,395 | \$501,396,304 |
| Wheat flour: | | | |
| Barrels..... | 105,756,645 | 104,013,278 | 99,763,777 |
| Value..... | \$550,116,254 | \$480,258,514 | \$333,997,686 |
| White— | | | |
| Barrels..... | 105,321,969 | 103,608,350 | (?) |
| Value..... | \$548,017,654 | \$478,484,601 | (?) |
| Graham— | | | |
| Barrels..... | 434,676 | 404,928 | (?) |
| Value..... | \$2,098,600 | \$1,773,913 | (?) |
| Rye flour: | | | |
| Barrels..... | 1,532,139 | 1,503,100 | 1,443,339 |
| Value..... | \$5,883,538 | \$5,892,108 | \$4,145,565 |
| Buckwheat flour: | | | |
| Pounds..... | 176,081,891 | 175,354,002 | 143,190,724 |
| Value..... | \$4,663,561 | \$4,379,359 | \$3,190,152 |
| Barley meal: | | | |
| Pounds..... | 28,550,952 | 68,508,655 | 91,275,646 |
| Value..... | \$486,000 | \$922,884 | \$903,710 |
| Corn meal and corn flour: | | | |
| Barrels..... | 21,552,737 | 23,624,693 | 27,838,811 |
| Value..... | \$66,941,095 | \$56,368,556 | \$52,167,739 |
| Hominy and grits: | | | |
| Pounds..... | 827,987,702 | 756,861,398 | 291,726,145 |
| Value..... | \$12,509,493 | \$3,455,420 | \$2,567,084 |
| Feed: | | | |
| Tons (2,000 pounds)..... | 5,132,369 | 3,456,786 | 2,993,080 |
| Value..... | \$140,541,915 | \$76,096,127 | \$63,011,421 |
| Offal: | | | |
| Tons (2,000 pounds)..... | 4,104,042 | 4,468,626 | 3,164,408 |
| Value..... | \$89,814,427 | \$76,105,532 | \$36,679,196 |
| All other cereal products—"breakfast foods," oatmeal, rolled oats, etc..... | \$4,720,106 | (?) | (?) |
| All other products..... | \$7,408,016 | \$4,554,895 | \$4,673,751 |

¹ In addition, merchant-ground products, valued at \$1,637,228, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation. The items covered by this amount were wheat flour, 105,477 barrels, valued at \$614,932; corn meal, 32,804 barrels, valued at \$87,507; rye flour, 2,620 barrels, valued at \$12,330; feed, 33,765 tons, valued at \$907,155; and offal, 627 tons, valued at \$15,274; and in addition, "breakfast foods," to the value of \$36,978,613, were made by establishments engaged primarily in the manufacture of food preparations. See note to table on page 513, for custom ground by-products.

² In addition, "breakfast foods," to the value of \$23,904,952, were made by establishments engaged primarily in the manufacture of food preparations.

³ Not reported separately.

Rice, cleaning and polishing.—The following table presenting statistics for the cleaning and polishing of

rice includes the quantity of rice milled, whether on a custom or exchange basis or in merchant mills. In 1909 there were 974,747,475 pounds of rice treated, as compared with 398,602,018 pounds in 1899, an increase of 144.5 per cent. The amount for 1909, however, was a little less than that for 1904. In 1909 there were only 3,873,735 pounds of foreign rough rice treated, as against 39,414,459 pounds in 1899. Attention is called to the fact that in 1909 whole rice formed 76.3 per cent of the total quantity of cleaned rice and broken rice 23.7 per cent, whereas in 1904 whole rice formed 65.9 per cent and broken rice 34.1 per cent of the cleaned-rice product.

| Table 37 | 1909 | 1904 | 1899 |
|--------------------------------|--------------|--------------|-------------|
| MATERIALS. | | | |
| Rough rice milled, pounds..... | 974,747,475 | 999,727,650 | 398,602,018 |
| Domestic..... | 970,874,749 | 990,470,625 | 396,187,359 |
| Foreign..... | 3,873,735 | 9,256,025 | 39,414,459 |
| PRODUCTS. | | | |
| Total value..... | \$32,371,457 | \$18,296,916 | \$8,723,726 |
| Clean rice: | | | |
| Pounds..... | 108,089,489 | 623,900,245 | 243,081,200 |
| Value..... | \$29,685,962 | \$15,357,133 | (?) |
| Whole— | | | |
| Pounds..... | 477,589,004 | 411,208,943 | (?) |
| Value..... | \$17,398,736 | \$12,677,124 | (?) |
| Broken— | | | |
| Pounds..... | 148,590,485 | 212,691,302 | (?) |
| Value..... | \$3,287,246 | \$3,280,009 | (?) |
| Polish: | | | |
| Pounds..... | 29,821,513 | 33,290,331 | 15,134,648 |
| Value..... | \$362,052 | \$267,647 | (?) |
| Brant: | | | |
| Pounds..... | 91,264,529 | 126,694,126 | 68,265,612 |
| Value..... | \$736,215 | \$591,193 | (?) |
| Hulls and waste..... | \$166,147 | \$116,390 | (?) |
| All other products..... | \$421,061 | \$54,583 | (?) |

¹ In addition, 48,150 pounds of clean rice, valued at \$,449, were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² Not reported separately.

Slaughtering and meat packing.—Table 38 presents statistics for the wholesale slaughtering and meat-packing industry. It includes the manufacture of sausage when done in connection with slaughtering or meat packing or when carried on in independent establishments, but it does not include the rendering of lard in independent establishments or the operations of retail butchers. The cost of all materials reported for the industry was \$1,202,827,784 in 1909 and \$685,310,099 in 1899, an increase of 75.5 per cent. The total value of products increased from \$788,367,647 in 1899 to \$1,370,568,101 in 1909, or 73.8 per cent.

A portion of the dressed meat reported as material was obtained from slaughtering establishments included in the tabulation, and therefore is duplicated in the total value of products.

On account of the higher prices in 1909, the percentages of increase in value from 1899 to 1909 for the different kinds of products are somewhat greater than the percentages of increase in quantity. This is

especially marked in the case of pork, which shows an increase of only 16,421,398 pounds, or less than 1 per cent, from 1899 to 1909, while the value of the product

increased \$166,376,042, or 51.9 per cent. The quantity of lard increased 223,785,765 pounds, or 21.9 per cent, while its value increased \$73,256,353, or 119.8 per cent.

| Table 38 | 1909 | 1904 | 1899 | | 1909 | 1904 | 1899 |
|------------------------------|-----------------|---------------|---------------|--|---------------|---------------|---------------|
| MATERIALS. | | | | PRODUCTS—continued. | | | |
| Total cost..... | \$1,202,827,784 | \$811,425,562 | \$685,310,099 | Pork: ² —Continued. | | | |
| Animals slaughtered..... | \$960,725,581 | \$675,893,676 | \$570,183,432 | Salted— | | | |
| Bees— | | | | Pounds..... | 952,130,557 | 1,558,886,256 | 1,371,334,561 |
| Number..... | 8,114,860 | 7,147,835 | 5,525,824 | Value..... | \$95,959,048 | \$116,626,710 | \$83,363,629 |
| Cost..... | \$392,127,010 | \$289,040,930 | \$247,146,262 | Hams— | | | |
| Weight, pounds— | | | | Pounds..... | 789,861,744 | | |
| On the hoof..... | 8,265,991,836 | 7,485,407,944 | 5,908,165,706 | Value..... | \$101,080,390 | | |
| Dressed..... | 4,409,718,922 | 4,066,264,877 | 3,222,733,617 | Shoulders— | | | |
| Calves— | | | | Pounds..... | 346,204,769 | 1,364,015,706 | 1,767,313,787 |
| Number..... | 2,504,728 | 1,568,130 | 883,857 | Value..... | \$33,225,458 | \$132,210,611 | \$148,171,166 |
| Cost..... | \$25,030,014 | \$12,665,557 | \$7,252,545 | Bacon and sides— | | | |
| Weight, pounds— | | | | Pounds..... | 741,345,933 | | |
| On the hoof..... | 419,604,080 | 201,683,572 | 124,354,340 | Value..... | \$97,856,403 | | |
| Dressed..... | 262,315,076 | 161,049,581 | 79,498,483 | Sausage, fresh or cured..... | \$59,564,582 | \$33,179,235 | \$25,982,709 |
| Sheep— | | | | All other fresh meat: | | | |
| Number..... | 12,255,501 | 10,875,339 | 9,110,172 | Pounds..... | 257,809,083 | 124,307,681 | 80,387,411 |
| Cost..... | \$59,924,931 | \$44,350,804 | \$36,859,832 | Value..... | \$10,392,768 | \$9,579,718 | \$7,810,553 |
| Weight, pounds— | | | | Canned goods: | | | |
| On the hoof..... | 987,566,521 | 930,168,367 | 704,260,802 | Pounds..... | 121,376,837 | (1) | 112,443,021 |
| Dressed..... | 496,640,869 | 404,872,621 | 389,132,646 | Value..... | \$15,345,543 | \$16,114,065 | \$9,166,931 |
| Hogs— | | | | Lard: | | | |
| Number..... | 33,870,616 | 30,595,522 | 30,595,522 | Pounds..... | 1,243,507,604 | 1,169,086,400 | 1,019,781,839 |
| Cost..... | \$483,383,848 | \$329,765,480 | \$278,370,494 | Value..... | \$134,306,587 | \$82,540,064 | \$61,140,234 |
| Weight, pounds— | | | | Tallow or oleo stock: | | | |
| On the hoof..... | 6,856,832,417 | 6,586,340,782 | 6,670,709,331 | Pounds..... | 202,844,139 | (1) | (1) |
| Dressed..... | 5,201,902,778 | 5,048,832,850 | 5,203,280,487 | Value..... | \$13,409,659 | (1) | (1) |
| Goats and kids— | | | | Oleo oil: | | | |
| Number..... | 33,224 | (1) | (1) | Gallons..... | 19,692,172 | 19,454,799 | 19,111,120 |
| Cost..... | \$121,230 | (1) | (1) | Value..... | \$16,475,726 | \$10,201,911 | \$11,432,542 |
| All other..... | \$138,548 | \$61,905 | \$554,209 | Other oils: | | | |
| Dressed meat, purchased..... | \$93,409,286 | \$53,114,957 | \$54,247,986 | Gallons..... | 11,343,186 | 4,893,133 | 8,240,569 |
| All other materials..... | \$148,692,917 | \$82,416,929 | \$60,878,681 | Value..... | \$6,360,745 | \$2,695,051 | \$3,436,358 |
| PRODUCTS. | | | | Oleomargarine: | | | |
| Total value..... | \$1,370,568,101 | \$922,037,528 | \$788,367,647 | Pounds..... | 42,912,406 | (1) | (1) |
| Beef: ¹ | | | | Value..... | \$5,903,981 | (1) | (1) |
| Pounds..... | 4,335,674,330 | 3,884,952,074 | 3,055,241,979 | Stearin: | | | |
| Value..... | \$339,742,608 | \$255,204,676 | \$220,495,401 | Pounds..... | 54,957,907 | (1) | (1) |
| Fresh— | | | | Value..... | \$6,871,935 | (1) | (1) |
| Pounds..... | 4,209,196,668 | 3,748,055,377 | 2,917,653,470 | Glue and gelatine: | | | |
| Value..... | \$327,583,456 | \$247,096,724 | \$210,833,047 | Pounds..... | 27,936,035 | 17,526,456 | (1) |
| Salted or cured— | | | | Value..... | \$1,944,338 | \$1,087,719 | (1) |
| Pounds..... | 126,477,662 | 136,896,607 | 137,588,503 | Fertilizers and fertilizer materials: | | | |
| Value..... | \$12,159,152 | \$3,107,952 | \$9,661,754 | Tons (2,000 pounds)..... | 362,136 | 369,074 | 168,505 |
| Veal, fresh: | | | | Value..... | \$8,720,818 | \$7,204,001 | \$3,300,042 |
| Pounds..... | 252,997,078 | 154,212,652 | 84,548,128 | Hides: | | | |
| Value..... | \$25,058,886 | \$12,850,369 | \$7,709,772 | Number..... | 9,560,138 | 8,039,204 | 6,249,044 |
| Mutton, fresh: | | | | Pounds..... | 504,563,930 | 459,443,857 | 335,968,207 |
| Pounds..... | 495,457,804 | 460,754,244 | 400,812,014 | Value..... | \$68,401,515 | \$44,206,107 | \$33,883,026 |
| Value..... | \$50,735,116 | \$36,880,455 | \$32,681,457 | Sheep pelts: | | | |
| Pork: ² | | | | Number..... | 11,091,308 | 11,344,544 | (1) |
| Pounds..... | 4,377,127,187 | 4,147,834,872 | 4,360,705,789 | Value..... | \$11,404,560 | \$8,904,043 | (1) |
| Value..... | \$486,846,161 | \$340,586,044 | \$320,409,119 | Goat and kid skins: | | | |
| Fresh— | | | | Number..... | 33,359 | (1) | (1) |
| Pounds..... | 1,547,494,184 | 1,224,932,010 | 1,222,007,411 | Value..... | \$20,679 | (1) | (1) |
| Value..... | \$158,714,862 | \$61,740,323 | \$33,934,324 | Wool: | | | |
| | | | | Pounds..... | 21,858,926 | 16,377,333 | 13,176,686 |
| | | | | Value..... | \$8,327,095 | \$5,229,521 | \$3,334,439 |
| | | | | Amount received for custom or contract work..... | \$1,329,739 | \$198,825 | \$141,154 |
| | | | | All other products..... | \$93,170,064 | \$55,400,064 | \$47,331,910 |

¹ Figures not available.

² Includes only the products specified.

Sugar.—Tables 39, 40, and 41 show the quantity and value of the products made from sugar beets and sugar cane of domestic growth, and the quantity of beets grown and the acreage devoted to this crop. They do not include statistics for maple sugar and sirup, or for sirup produced on farms from sugar and sorghum cane, or the data for establishments engaged primarily in the refining of cane sugar or molasses. The value of products of the domestic beet-sugar and cane-sugar mills amounted to \$77,991,683. In 1909 the value of products of the refineries above mentioned aggregated \$248,628,659. Of this value the cost of materials, which consist chiefly of raw sugar imported from Cuba, Porto Rico, Hawaii, and the Philippines, represented 90.9 per cent. The

combined value of products of all establishments producing raw or refined sugar was \$326,620,342 in 1909. This amount includes some duplication in the case of raw sugar produced by cane mills and used as material for the refineries.

As shown by Tables 39, 40, and 41, the total production of sugar in 1909 from beets and cane of domestic growth was 828,540 tons, of which beet sugar constituted 60.6 per cent and cane sugar 39.4 per cent. The output of beet sugar increased more than five-fold in quantity since 1899, while the production of cane sugar, for which statistics for previous censuses can not be presented in comparable form, has increased but slightly. The *ton of 2,000 pounds* is used in showing quantities.

| Table 39 PRODUCT. | 1909 | |
|--|---------|--------------|
| | Tons. | Value. |
| Total..... | | \$77,991,883 |
| Beet-sugar industry..... | | 48,123,383 |
| Cane-sugar industry..... | | 29,868,500 |
| Sugar..... | 828,540 | 72,033,302 |
| Beet..... | 501,682 | 45,837,629 |
| Cane..... | 326,858 | 26,095,673 |
| Molasses, sirup, and all other products..... | | 5,958,381 |
| Beet..... | | 2,184,754 |
| Cane..... | | 3,773,627 |

The following table presents the statistics for the beet-sugar industry for the censuses of 1909, 1904, and 1899:

| Table 40 | 1909 | 1904 | 1899 |
|--|---------------------|---------------------|--------------------|
| Acreage of sugar beets, total planted. | 415,964 | 240,757 | 135,305 |
| Directly by factory..... | 29,459 | 20,484 | 10,239 |
| By tenants of factory..... | 18,166 | 20,223 | 13,074 |
| On contract by others than tenants of factory..... | 368,339 | 200,050 | 111,992 |
| Beets used, tons..... | 3,965,356 | 2,175,417 | 794,658 |
| Grown directly by factory..... | 266,768 | 169,839 | 23,241 |
| Grown by tenants of factory..... | 163,843 | 210,247 | 95,071 |
| Grown on contract by others than tenants of factory..... | 3,534,745 | 1,795,331 | 676,346 |
| PRODUCTS. | | | |
| Total value..... | \$48,123,383 | \$24,393,794 | \$7,323,857 |
| Sugar: | | | |
| Granulated— | | | |
| Tons..... | 496,807 | 248,309 | 57,843 |
| Value..... | \$45,645,810 | \$23,493,373 | \$5,580,527 |
| Raw— | | | |
| Tons..... | 4,875 | 5,612 | 23,896 |
| Value..... | \$291,819 | \$431,229 | \$1,042,054 |
| Molasses or sirup: | | | |
| Gallons..... | 20,812,747 | 9,609,542 | 13,551,856 |
| Value..... | \$1,129,906 | \$221,097 | \$25,102 |
| Beet pulp..... | \$795,900 | \$202,070 | \$21,822 |
| All other products..... | \$258,949 | \$46,025 | \$54,252 |

¹ Includes quantities for which no value could be given; also wastage.

The statistics for cane mills for 1909 are shown in detail in Table 41.

| Table 41 PRODUCT. | 1909 |
|--|---------------------|
| Total value..... | \$30,620,738 |
| Sugar: ¹ | |
| Tons..... | 326,858 |
| Value..... | \$26,095,673 |
| Vacuum pan— | |
| Tons..... | 323,180 |
| Value..... | \$25,794,287 |
| Brown (open-kettle process)— | |
| Tons..... | 3,678 |
| Value..... | \$301,386 |
| Molasses (liquid product from which more or less sugar has been extracted): | |
| Gallons..... | 24,587,581 |
| Value..... | \$2,845,559 |
| Sirup (liquid product from which no sugar has been extracted): | |
| Gallons..... | 1,449,860 |
| Value ² | \$365,632 |
| All other products³..... | \$1,313,874 |

¹ Does not include the operations of four establishments which manufacture sugar, two of which were operated in connection with penal institutions and two of which were engaged primarily in the manufacture of products other than those covered by the industry designation. The output of these establishments was 7,281 tons of sugar and 693,302 gallons of molasses.

² Cane sugar manufactured direct from cane, not including the refining of raw sugar purchased.

³ The value of sirup produced by establishments which manufacture no sugar is included under "All other products."

TEXTILES.

Statistics are presented for several branches of the textile and allied manufacturing industries, designated as follows: Carpets and rugs, other than rag; cordage and twine and jute and linen goods; cotton goods, including cotton small wares; hats, fur-felt; hosiery and knit goods; oilcloth and linoleum; shoddy; silk and silk goods, including throwsters; and woolen, worsted, and felt goods, and wool hats.

Table 42 shows the development of the textile industry since 1850. It covers all the industries mentioned above except the manufacture of fur-felt hats and of oilcloth and linoleum, for which statistics are shown in separate tables, and also includes the dyeing and finishing of textiles.

| Table 42 CENSUS. | Number of establishments. | NUMBER ENGAGED IN INDUSTRY. ¹ | | Capital. | Salaries. | Wages. | Cost of materials. | Value of products. | Value added by manufacture. |
|----------------------------|---------------------------|--|--------------------------------|-----------------|-------------------------|---------------|--------------------|--------------------|-----------------------------|
| | | Salaried employees. | Wage earners (average number). | | | | | | |
| 1909 (census of 1910)..... | 5,352 | 31,208 | 881,128 | \$1,841,242,131 | \$49,123,634 | \$335,398,736 | \$992,635,299 | \$1,684,636,499 | \$695,901,206 |
| 1904 (census of 1905)..... | 4,737 | 24,372 | 742,629 | 1,351,451,715 | 32,862,121 | 250,514,233 | 763,174,981 | 1,225,686,444 | 472,511,463 |
| 1899 (census of 1900)..... | 4,521 | 17,024 | 664,429 | 1,049,636,201 | 23,532,773 | 210,059,411 | 527,209,771 | 949,052,698 | 412,842,917 |
| 1889 (census of 1890)..... | 4,420 | ² 10,851 | 520,196 | 772,673,605 | ² 12,743,405 | 169,422,053 | 454,272,469 | 768,357,254 | 314,084,765 |
| 1879 (census of 1880)..... | 4,143 | (*) | 438,557 | 414,179,946 | (*) | 105,642,824 | 306,495,799 | 538,491,222 | 231,905,423 |
| 1869 (census of 1870)..... | 4,855 | (*) | 275,656 | 298,611,518 | (*) | 88,784,211 | 354,482,513 | 522,312,413 | 167,859,650 |
| 1859 (census of 1860)..... | 3,058 | (*) | 194,394 | 150,205,852 | (*) | 40,410,946 | 113,082,086 | 215,166,444 | 102,084,408 |
| 1849 (census of 1850)..... | 3,025 | (*) | 146,877 | 112,513,947 | (*) | (*) | 76,715,959 | 128,769,971 | 52,954,012 |

¹ Not including proprietors and firm members.

² Includes proprietors and firm members with their salaries.

³ Not reported separately.

⁴ Includes 2,115 officers and clerks whose salaries were not reported.

⁵ Not reported fully.

The combined products of the industry in 1909 were valued at \$1,684,636,499, an increase of \$744,583,811, or 79.2 per cent, over the total for 1899. The total includes considerable duplication of values, but probably no more, relatively, than at previous censuses.

The percentage of increase since 1899 is the highest for any decade since that from 1859-1869. In 1909

cotton goods contributed 37.3 per cent of the value of all products represented in the total; the products of the woolen industries, including carpets and rugs, 30.1 per cent; hosiery and knit goods, 11.9 per cent; silk goods, 11.7 per cent; cordage and twine and jute and linen goods, 3.6 per cent; shoddy, four-tenths of 1 per cent; and the dyeing and finishing of textiles by independent establishments, 5 per cent.

The following table gives the number of producing spindles in active textile mills at the time of each census from 1869 to 1909, inclusive. It does not include spindles in establishments engaged primarily in the manufacture of products other than textiles, nor spindles employed on flax, hemp, jute, and allied fibers, of which latter class 142,169 were returned in 1909.

| CENSUS. | NUMBER OF SPINDLES. | | | | |
|--------------------------|---------------------|------------|-----------|-----------|-----------|
| | Total. | Cotton. | Silk. | Woolen. | Worsted. |
| 1909 (census of 1910) .. | 33,866,479 | 28,178,862 | 1,777,962 | 2,156,849 | 1,752,806 |
| 1904 (census of 1905) .. | 28,721,742 | 23,672,064 | 1,394,020 | 2,456,389 | 1,199,269 |
| 1899 (census of 1900) .. | 23,901,557 | 19,463,984 | 1,213,493 | 2,229,181 | 994,899 |
| 1889 (census of 1890) .. | 18,092,133 | 14,884,180 | 718,360 | 2,332,269 | 657,324 |
| 1879 (census of 1880) .. | 13,170,743 | 10,053,435 | 262,312 | 1,915,070 | 339,926 |
| 1869 (census of 1870) .. | 9,338,953 | 7,280,800 | 12,040 | 1,845,406 | 200,617 |

¹ Includes some accessory spindles, except for silk.

The percentage of increase in the total number of spindles was greater from 1899 to 1909 than for any other decade shown. In 1909 cotton spindles formed 83.2 per cent of the total number, silk spindles 5.2 per cent, and woolen and worsted spindles combined 11.5 per cent. In 1909 cotton spindles represented a slightly larger proportion of all spindles than in 1904 and 1899 and woolen and worsted spindles a slightly smaller proportion.

The loom equipment of active establishments at the time of the several censuses, beginning with that of 1869, is presented in the following table. It does not include looms in establishments engaged primarily in the manufacture of products other than textiles, nor looms employed on flax, hemp, jute, and similar fibers. Cotton looms operated by power formed 80.6 per cent of the total number of power looms in 1909; silk looms, 9.1 per cent; and those employed in the woolen industry, which includes the manufacture of woolen and worsted goods and carpets and rugs, 10.2 per cent. In 1899 the corresponding percentages were 79.5 for cotton looms, 7.7 for silk, and 12.8 for those in the woolen industries.

| CLASS OF LOOMS AND CENSUS. | NUMBER OF LOOMS. | | | | | |
|----------------------------|------------------|-----------------------------|------------------|------------------|----------------|-------------------|
| | Total. | Used in the manufacture of— | | | | |
| | | Cotton goods. | Silk goods. | Woolen goods. | Worsted goods. | Carpets and rugs. |
| Power: | | | | | | |
| 1909 (census of 1910) .. | 825,473 | 665,052 | 75,406 | 33,148 | 39,476 | 11,796 |
| 1904 (census of 1905) .. | 696,785 | 559,781 | 59,775 | 38,104 | 28,123 | 11,002 |
| 1899 (census of 1900) .. | 573,214 | 455,752 | 44,257 | 36,734 | 26,030 | 9,841 |
| 1889 (census of 1890) .. | 412,441 | 324,866 | 20,822 | 38,523 | 19,929 | 8,301 |
| 1879 (census of 1880) .. | 285,494 | 227,383 | 5,321 | 32,955 | 11,703 | 8,132 |
| 1869 (census of 1870) .. | 200,791 | 157,748 | 1,281 | 34,183 | 6,128 | 1,451 |
| Hand: | | | | | | |
| 1909 (census of 1910) .. | 248 | (¹) | (²) | 41 | | 207 |
| 1904 (census of 1905) .. | 1,039 | (¹) | 283 | 66 | | 690 |
| 1899 (census of 1900) .. | 1,311 | (¹) | 173 | 83 | | 1,055 |
| 1889 (census of 1890) .. | 4,823 | (¹) | 1,747 | 448 | | 2,628 |
| 1879 (census of 1880) .. | 7,029 | (¹) | 3,153 | 781 | | 3,995 |
| 1869 (census of 1870) .. | 4,163 | (¹) | 188 | (¹) | | 3,975 |

¹ Not reported.

² Included with power looms.

Carpets and rugs.—The following table presents statistics for the manufacture of carpets and rugs, exclusive of rag and grass carpets and rugs.

| Table 45 | | 1909 | 1904 | 1899 |
|---|--|--------------|------------------|------------------|
| MATERIALS. | | | | |
| Total cost..... | | \$39,568,004 | \$37,947,954 | \$27,228,719 |
| Wool, in condition purchased: | | | | |
| Pounds..... | | 64,135,020 | 51,320,521 | 51,871,334 |
| Cost..... | | \$11,752,390 | \$10,431,146 | \$8,104,107 |
| Equivalent of above in scoured condition, pounds..... | | 51,474,353 | 31,551,895 | 37,500,231 |
| Animal hair: | | | | |
| Pounds..... | | 5,400,944 | 6,805,802 | 6,189,757 |
| Cost..... | | \$474,057 | \$593,588 | \$549,610 |
| Cotton: | | | | |
| Pounds..... | | 5,147,130 | 1,097,369 | 1,943,942 |
| Cost..... | | \$533,302 | \$251,112 | \$129,449 |
| Partly manufactured materials not made in mill reporting: | | | | |
| Waste and noils— | | | | |
| Pounds..... | | 2,732,034 | 2,172,481 | 2,325,054 |
| Cost..... | | \$513,392 | \$341,309 | \$305,733 |
| Yarns— | | | | |
| Woolen— | | | | |
| Pounds..... | | 25,718,747 | 32,431,400 | 32,996,316 |
| Cost..... | | \$5,036,118 | \$6,648,001 | \$5,030,654 |
| Worsted— | | | | |
| Pounds..... | | 11,292,749 | 11,355,903 | 9,218,267 |
| Cost..... | | \$5,588,915 | \$5,405,072 | \$3,544,800 |
| Cotton— | | | | |
| Pounds..... | | 26,106,241 | 27,421,831 | 19,823,561 |
| Cost..... | | \$4,772,594 | \$4,757,850 | \$2,744,928 |
| Linen— | | | | |
| Pounds..... | | 8,792,876 | 8,228,200 | 8,388,211 |
| Cost..... | | \$1,606,009 | \$1,355,892 | \$1,164,826 |
| Jute, ramie, and other vegetable fiber— | | | | |
| Pounds..... | | 55,592,343 | 49,119,558 | 38,846,413 |
| Cost..... | | \$3,026,604 | \$3,404,516 | \$2,476,029 |
| Chemicals and dyestuffs..... | | \$1,729,492 | \$1,407,476 | \$1,151,726 |
| All other materials..... | | \$3,030,035 | \$3,291,992 | \$2,026,797 |
| PRODUCTS. | | | | |
| Total value..... | | \$71,188,152 | \$61,586,433 | \$48,192,351 |
| Carpets: | | | | |
| Square yards..... | | 57,176,729 | 66,428,033 | 64,238,761 |
| Value..... | | \$48,475,889 | \$43,901,125 | \$35,405,926 |
| Axminster and Moquette— | | | | |
| Square yards..... | | 12,507,261 | 6,413,686 | 5,026,778 |
| Value..... | | \$13,680,806 | \$9,368,757 | \$4,762,269 |
| Wilton— | | | | |
| Square yards..... | | 4,576,368 | 1,297,872 | 1,358,126 |
| Value..... | | \$8,737,708 | \$2,726,067 | \$4,030,842 |
| Brussels— | | | | |
| Square yards..... | | 3,900,026 | 3,024,162 | 2,686,493 |
| Value..... | | \$5,216,067 | \$3,898,675 | \$2,979,867 |
| Tapestry velvet— | | | | |
| Square yards..... | | 2,092,198 | 2,833,288 | 4,280,066 |
| Value..... | | \$5,514,130 | \$7,754,081 | \$3,743,353 |
| Tapestry Brussels— | | | | |
| Square yards..... | | 11,405,514 | 14,099,074 | 8,737,449 |
| Value..... | | \$8,576,906 | \$9,955,043 | \$5,520,665 |
| Ingrain— | | | | |
| Square yards..... | | 17,799,762 | 33,557,951 | 39,920,849 |
| Value..... | | \$9,740,072 | \$13,287,302 | \$14,368,930 |
| Rugs, woven whole: | | | | |
| Square yards..... | | 24,042,152 | 16,244,810 | 12,171,289 |
| Value..... | | \$18,490,449 | \$12,870,060 | \$8,145,232 |
| Axminster and Moquette— | | | | |
| Square yards..... | | 3,184,097 | 1,767,920 | 327,598 |
| Value..... | | \$3,691,900 | \$2,107,383 | \$342,262 |
| Wilton— | | | | |
| Square yards..... | | 767,248 | 1,097,188 | 339,784 |
| Value..... | | \$1,381,562 | \$1,983,777 | \$545,967 |
| Brussels— | | | | |
| Square yards..... | | 475,831 | (³) | (³) |
| Value..... | | \$333,582 | (³) | (³) |
| Tapestry velvet— | | | | |
| Square yards..... | | 3,732,072 | (³) | (³) |
| Value..... | | \$3,513,063 | (³) | (³) |
| Tapestry Brussels— | | | | |
| Square yards..... | | 5,672,902 | 2,009,834 | 18,750 |
| Value..... | | \$4,422,427 | \$1,509,673 | \$9,000 |
| Ingrain art squares— | | | | |
| Square yards..... | | 6,131,862 | 7,135,546 | 2,722,323 |
| Value..... | | \$2,408,060 | \$2,785,457 | \$1,175,951 |
| Smyrna— | | | | |
| Square yards..... | | 1,400,233 | 3,828,282 | 3,651,661 |
| Value..... | | \$1,060,322 | \$4,134,500 | \$3,680,618 |
| Other— | | | | |
| Square yards..... | | 2,676,947 | 406,042 | 5,111,173 |
| Value..... | | \$1,078,633 | \$349,800 | \$2,391,434 |
| All other products..... | | \$4,221,814 | \$4,724,658 | \$4,641,193 |
| MACHINERY. | | | | |
| Sets of cards..... | | 745 | 686 | 488 |
| Woolen..... | | 456 | 389 | |
| Worsted..... | | 180 | 238 | |
| Cotton..... | | 109 | 59 | |
| Spindles..... | | 252,096 | 255,347 | 209,206 |
| Producing..... | | 211,472 | 211,331 | 167,123 |
| Doubling and twisting..... | | 40,624 | 44,016 | 42,083 |
| Looms, all classes..... | | 12,271 | 13,853 | 12,511 |

¹ In addition, in 1909 carpets and rugs, to the value of \$479,161, and in 1904, to the value of \$70,000, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² Includes Wilton velvet.

³ Not reported separately.

⁴ Not reported fully.

The aggregate production of carpets and rugs increased from 76,410,050 square yards in 1899 to 81,218,881 square yards in 1909, or only 6.3 per cent, but the value of the output increased from \$43,551,158 in 1899 to \$66,966,338 in 1909, or 53.8 per cent. The increase has been in all classes of rugs except Smyrna and "other rugs" and in all classes of carpets except ingrain. The cost of materials used increased at a rate almost equal to that of the value of products. The total carpet product decreased 11 per cent in quantity during the decade, but increased 36.9 per cent in value. The output of pile carpets increased 61.9 per cent in quantity and 98.3 per cent in value, while that of woven ply or ingrain carpets decreased 55.4 per cent in quantity and 53 per cent in value. The production of rugs woven whole increased 97.5 per cent in quantity and 127 per cent in value. More than two-thirds of the fiber material used in the manufacture of carpets is yarn purchased, and to the extent that this yarn is manufactured by carpet mills there is a duplication in the products.

Cordage and twine and jute and linen goods.—Table 46 presents statistics for the manufacture of cordage and twine and jute and linen goods, including nets and seines, but does not include the figures for these classes of goods produced in penal institutions or in establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

The principal products manufactured in this country from flax, hemp, and jute fibers are twine, rope, and thread, and yarns for sale to establishments using chiefly cotton, wool, and silk fibers.

The production of linen toweling and other linen woven goods increased decidedly between 1899 and 1909, but this item is not shown separately in the table, because a very large proportion of the total product is manufactured by one establishment.

The output of gunny bagging decreased from 74,090,760 square yards in 1899 to 69,311,288 square yards in 1909, while its value increased from \$3,462,479 to \$3,507,482. The aggregate rope and twine product in 1909 was 504,020,697 pounds, valued at \$42,864,658, as compared with 343,656,384 pounds, valued at \$31,250,468, in 1899. In 1899 cotton rope and twine formed 3 per cent of the total output of the cordage and twine industry, and in 1909, 7.4 per cent. This class of products increased 260.6 per cent in quantity and 372.9 per cent in value during the decade, while rope and twine of all other fiber increased 40 per cent in quantity and 21.6 per cent in value. In addition to the cotton rope and twine product included in the figures given above, 21,319,678 pounds, valued at \$3,581,917, were made in 1909 in mills engaged primarily in the manufacture of cotton goods.

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| Table 46 | 1909 | 1899 |
|---|---------------------|---------------------|
| MATERIALS. | | |
| Total cost..... | \$40,914,810 | \$33,063,793 |
| Hard fibers: | | |
| Sisal and manila hemp— | | |
| Pounds..... | 335,460,574 | 269,594,673 |
| Cost..... | \$19,314,306 | \$17,743,624 |
| Other kinds— | | |
| Pounds..... | 17,222,998 | 6,344,371 |
| Cost..... | \$707,892 | \$362,628 |
| Soft fibers: | | |
| Jute— | | |
| Pounds..... | 121,992,427 | 87,443,201 |
| Cost..... | \$4,134,265 | \$2,431,429 |
| Jute butts— | | |
| Pounds..... | 138,364,122 | 118,806,025 |
| Cost..... | \$2,083,176 | \$1,795,653 |
| Flax and flax tow— | | |
| Pounds..... | 26,954,785 | 16,980,646 |
| Cost..... | \$3,174,609 | \$2,080,862 |
| Hemp and hemp tow— | | |
| Pounds..... | 19,724,079 | 25,588,715 |
| Cost..... | \$1,496,125 | \$1,404,653 |
| Cotton: | | |
| Pounds..... | 27,624,490 | 13,022,755 |
| Cost..... | \$2,922,933 | \$849,426 |
| Yarns, purchased: | | |
| Cotton— | | |
| Pounds..... | 7,077,959 | 4,973,080 |
| Cost..... | \$1,291,699 | \$709,889 |
| Flax, hemp, jute, and ramie— | | |
| Pounds..... | 2,676,367 | 1,788,179 |
| Cost..... | \$445,378 | \$262,156 |
| All other materials..... | \$5,294,617 | \$5,433,573 |
| PRODUCTS. | | |
| Total value..... | \$61,019,986 | \$49,077,629 |
| Rope and binder twine..... | \$33,930,396 | \$36,909,027 |
| Sisal— | | |
| Pounds..... | 225,756,536 | 172,238,291 |
| Value..... | \$15,969,280 | \$14,065,506 |
| Manila— | | |
| Pounds..... | 150,169,082 | 123,564,201 |
| Value..... | \$12,892,947 | \$12,192,796 |
| Cotton rope— | | |
| Pounds..... | 16,790,793 | 1,615,824 |
| Value..... | \$3,011,613 | \$247,259 |
| Jute rope— | | |
| Pounds..... | 27,749,612 | 10,012,165 |
| Value..... | \$1,556,160 | \$463,413 |
| All other— | | |
| Pounds..... | 7,767,581 | (¹) |
| Value..... | \$499,906 | (¹) |
| Twine, not including binder..... | \$2,934,352 | \$4,341,441 |
| Cotton— | | |
| Pounds..... | 20,412,631 | 8,601,707 |
| Value..... | \$3,518,096 | \$1,133,649 |
| Jute— | | |
| Pounds..... | 35,516,217 | 1,679,127 |
| Value..... | \$2,557,744 | \$117,539 |
| Hemp— | | |
| Pounds..... | 8,013,340 | 9,065,024 |
| Value..... | \$1,091,291 | \$1,019,590 |
| Flax— | | |
| Pounds..... | 2,967,053 | 3,545,978 |
| Value..... | \$830,960 | \$909,499 |
| Flax or hemp mixed with jute— | | |
| Pounds..... | 8,907,403 | 12,924,067 |
| Value..... | \$936,312 | \$1,101,203 |
| Yarns for sale..... | \$5,434,037 | \$4,455,734 |
| Jute— | | |
| Pounds..... | 62,512,247 | 54,271,860 |
| Value..... | \$4,361,550 | \$3,230,835 |
| Flax and hemp— | | |
| Pounds..... | 5,486,891 | 8,259,653 |
| Value..... | \$982,742 | \$1,125,971 |
| Other— | | |
| Pounds..... | 732,120 | 946,567 |
| Value..... | \$89,745 | \$98,928 |
| Linen thread: | | |
| Pounds..... | 6,530,803 | 4,021,044 |
| Value..... | \$3,407,606 | \$2,332,287 |
| Gunny bagging: | | |
| Square yards..... | 69,311,288 | 74,090,760 |
| Value..... | \$3,507,482 | \$3,462,479 |
| Jute carpets and rugs: | | |
| Square yards..... | 2,206,114 | 2,953,658 |
| Value..... | \$549,221 | \$357,568 |
| All other products..... | \$5,257,580 | \$7,219,093 |

¹ In addition, cordage and twine and jute and linen goods to the value of \$890,629 were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² Not reported.

Cotton goods, including cotton small wares.—Table 47 presents the statistics for cotton manufactures, not including cotton hosiery and knit goods.

The aggregate value of cotton woven goods manufactured, exclusive of narrow weaves, such as tape and webbing, was \$456,089,401 in 1909, compared with \$243,253,155 in 1899, an increase of 87.5 per cent for the decade. The rate of increase, however, in quantity was very much less, 6,348,568,593 square yards of woven goods being reported in 1909, compared with

4,523,430,616 in 1899, an increase of 40.3 per cent. The output of almost every class of woven goods increased during the decade.

The total production of yarn in cotton mills in 1909 was 2,040,290,743 pounds, of which 470,370,995 pounds, valued at \$109,314,953, were made for sale. Part of this yarn was sold to other cotton mills, thus involving duplication in the total value of products for the industry. Some of it was sold to woolen and silk mills and a large quantity to knitting mills.

| Table 47 | 1909 | 1904 | 1899 | | 1909 | 1904 | 1899 |
|----------------------------------|---------------|---------------|---------------|---------------------------------|---------------|--------------|--------------|
| MATERIALS. | | | | PRODUCTS—continued. | | | |
| Total cost..... | \$371,009,470 | \$286,255,303 | \$176,551,527 | Woven goods—Continued. | | | |
| Cotton: | | | | Napped fabrics— | | | |
| Pounds..... | 2,335,344,906 | 1,876,437,150 | 1,817,643,390 | Square yards..... | 305,655,864 | 330,808,140 | 268,892,716 |
| Cost..... | \$274,724,210 | \$222,212,740 | \$125,169,610 | Value..... | \$25,695,307 | \$26,108,315 | \$18,231,044 |
| Domestic— | | | | Corduroy, cotton, velvet, and | | | |
| Pounds..... | 2,259,312,974 | 1,832,736,744 | 1,761,798,458 | plush— | | | |
| Cost..... | \$261,547,820 | \$214,615,844 | \$110,098,443 | Square yards..... | 19,706,438 | 16,014,556 | 7,961,623 |
| Foreign— | | | | Value..... | \$0,965,034 | \$4,790,573 | \$2,082,017 |
| Pounds..... | 76,031,932 | 43,700,406 | 55,844,932 | Mosquito and other netting— | | | |
| Cost..... | \$13,176,300 | \$7,596,905 | \$0,071,173 | Square yards..... | 50,100,819 | 36,232,918 | 41,885,023 |
| Cotton yarn: | | | | Value..... | \$2,103,500 | \$794,953 | \$875,868 |
| Pounds..... | 126,707,003 | 105,411,516 | 94,602,864 | Upholstering goods— | | | |
| Cost..... | \$34,384,791 | \$24,611,200 | \$17,622,568 | Square yards..... | 94,840,051 | 65,502,212 | 51,314,609 |
| Cotton waste: | | | | Value..... | \$14,882,842 | \$12,111,698 | \$8,705,384 |
| Pounds..... | 80,044,061 | 76,678,645 | 41,234,000 | Tapestries (piece goods and | | | |
| Cost..... | \$4,225,790 | \$3,814,290 | \$1,515,591 | curtains)— | | | |
| Starch: | | | | Square yards..... | 10,657,385 | 9,605,006 | 10,166,538 |
| Pounds..... | 71,774,574 | 54,480,534 | 53,800,734 | Value..... | \$4,723,907 | \$4,242,506 | \$4,158,600 |
| Cost..... | \$2,114,756 | \$1,506,804 | \$1,227,010 | Lace and lace curtains— | | | |
| Chemicals and dyestuffs..... | \$4,886,514 | \$4,573,375 | \$5,718,107 | Square yards..... | 81,007,314 | 53,511,222 | 37,825,198 |
| All other materials..... | \$50,673,409 | \$29,536,885 | \$25,298,035 | Value..... | \$8,022,082 | \$7,208,211 | \$3,585,138 |
| PRODUCTS. | | | | Other— | | | |
| Total value..... | \$628,391,813 | \$450,467,704 | \$339,200,320 | Square yards..... | 3,175,352 | 2,475,984 | 3,322,873 |
| Woven goods: | | | | Value..... | \$1,236,853 | \$600,981 | \$661,646 |
| Square yards..... | 6,348,568,593 | 5,110,308,812 | 4,523,430,616 | Bags and bagging— | | | |
| Value..... | \$456,089,401 | \$324,747,837 | \$243,253,155 | Square yards..... | 63,107,568 | 57,007,603 | 32,739,616 |
| Plain cloth for printing or con- | | | | Value..... | \$4,802,451 | \$3,953,732 | \$2,554,192 |
| verting— | | | | Cotton towels and toweling— | | | |
| Square yards..... | 2,224,677,848 | 1,818,216,172 | 1,581,613,827 | Square yards..... | 52,778,170 | 40,280,292 | (?) |
| Value..... | \$111,097,889 | \$80,311,612 | \$57,780,940 | Value..... | \$6,037,075 | \$4,365,470 | (?) |
| Brown or bleached sheetings and | | | | Tape and webbing..... | \$5,531,674 | \$4,060,488 | \$2,521,402 |
| shirtings— | | | | Yarns for sale: | | | |
| Square yards..... | 1,484,353,529 | 1,172,309,182 | 1,212,403,048 | Pounds..... | 470,370,995 | 364,634,763 | 332,302,621 |
| Value..... | \$88,802,985 | \$61,253,370 | \$55,518,032 | Value..... | \$109,314,953 | \$79,939,687 | \$56,216,066 |
| Twills and sateens— | | | | Thread: | | | |
| Square yards..... | 388,314,901 | 366,142,513 | 235,800,518 | Pounds..... | 23,700,957 | 17,163,741 | 15,907,058 |
| Value..... | \$34,274,107 | \$23,701,305 | \$14,301,302 | Value..... | \$20,516,269 | \$15,043,043 | \$11,908,671 |
| Fancy woven fabrics— | | | | Twine: | | | |
| Square yards..... | 426,710,350 | 306,254,085 | 237,841,603 | Pounds..... | 13,715,771 | 7,301,589 | 11,642,718 |
| Value..... | \$47,498,713 | \$28,486,342 | \$21,060,310 | Value..... | \$2,417,391 | \$1,428,994 | \$1,546,611 |
| Ginghams— | | | | Cordage and rope: | | | |
| Square yards..... | 537,430,463 | 302,316,132 | 278,392,708 | Pounds..... | 7,603,907 | (?) | (?) |
| Value..... | \$37,939,040 | \$22,471,897 | \$10,179,200 | Value..... | \$1,164,520 | (?) | (?) |
| Duck— | | | | Cotton waste for sale: | | | |
| Square yards..... | 162,476,322 | 122,601,212 | 120,234,076 | Pounds..... | 310,513,348 | 247,649,640 | 270,862,613 |
| Value..... | \$27,485,892 | \$17,005,982 | \$14,263,008 | Value..... | \$10,874,380 | \$10,062,057 | \$5,563,570 |
| Drills— | | | | All other products..... | \$22,483,213 | \$16,185,598 | \$19,190,846 |
| Square yards..... | 238,869,407 | 104,735,303 | 237,206,549 | MACHINERY. | | | |
| Value..... | \$17,750,151 | \$12,596,063 | \$11,802,794 | Producing spindles, number..... | 27,425,608 | 23,195,143 | 19,050,952 |
| Ticks, denims, and stripes— | | | | Looms, all classes, number..... | 665,049 | 559,296 | 455,752 |
| Square yards..... | 264,870,508 | 256,375,486 | 181,800,853 | | | | |
| Value..... | \$27,350,162 | \$23,797,578 | \$16,446,633 | | | | |
| Cottonades— | | | | | | | |
| Square yards..... | 25,676,286 | 25,362,346 | 20,323,947 | | | | |
| Value..... | \$3,343,533 | \$2,998,971 | \$2,791,431 | | | | |

¹ In addition, cotton goods to the value of \$2,224,006 were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² Not reported separately.

Felt goods.—Table 48 covers the statistics for all establishments engaged primarily in the manufacture of felt goods except those making hats. The aggregate value of products of the three felting industries—the manufacture of felt goods, fur-felt hats, and wool-felt hats—was \$64,099,667 in 1909, \$48,035,213 in 1904, and \$37,864,818 in 1899, the increase in value from 1899 to 1909 being 69.3 per cent.

The value of products for the felt-goods industry, exclusive of the making of felt hats, was \$11,852,626 in 1909 and \$6,461,691 in 1899, an increase for the decade of 83.4 per cent.

The increase in the production of endless belts during the decade was particularly large, amounting to 191 per cent in quantity and 215.1 per cent in value.

Table 48

| | 1909 | 1904 | 1899 |
|---|--------------|-------------|-------------|
| MATERIALS. | | | |
| Total cost..... | \$6,967,206 | \$5,754,026 | \$3,801,028 |
| Wool, in condition purchased: | | | |
| Pounds..... | 12,409,826 | 11,868,238 | 9,606,263 |
| Cost..... | \$3,927,393 | \$3,388,588 | \$2,196,440 |
| Equivalent of above in scoured condition, pounds..... | 9,308,172 | 8,131,082 | 6,468,097 |
| Animal hair, etc.: | | | |
| Pounds..... | 8,144,011 | 6,974,634 | 2,819,521 |
| Cost..... | \$239,244 | \$373,797 | \$125,803 |
| Cotton: | | | |
| Pounds..... | 1,375,670 | 1,982,624 | 1,225,850 |
| Cost..... | \$155,815 | \$217,200 | \$77,683 |
| Shoddy, mungo, and wool extract: | | | |
| Pounds..... | 2,536,243 | 1,532,127 | 712,373 |
| Cost..... | \$261,878 | \$167,031 | \$80,737 |
| Waste and nolls: | | | |
| Pounds..... | 4,874,712 | 1,948,969 | 2,653,590 |
| Cost..... | \$1,220,110 | \$452,509 | \$552,992 |
| Chemicals and dyestuffs..... | \$219,891 | \$189,750 | \$128,296 |
| All other materials..... | \$942,875 | \$975,151 | \$639,077 |
| PRODUCTS. | | | |
| Total value..... | \$11,852,626 | \$8,948,694 | \$8,461,691 |
| Felt cloths: | | | |
| Square yards..... | 3,764,468 | 3,689,610 | 2,056,002 |
| Value..... | \$1,381,854 | \$1,830,627 | \$548,543 |
| Trimming and lining felts, felt skirts, etc.: | | | |
| Square yards..... | 5,953,410 | | |
| Value..... | \$1,329,686 | 5,145,340 | 2,469,830 |
| Saddle felts: | | | |
| Pounds..... | 1,650,991 | \$1,183,908 | \$796,718 |
| Value..... | \$575,849 | | |
| Endless belts: | | | |
| Pounds..... | 3,243,034 | 1,770,124 | 1,114,357 |
| Value..... | \$3,417,822 | \$1,707,216 | \$1,084,835 |
| Boot and shoe linings: | | | |
| Square yards..... | 1,661,090 | 2,823,137 | 1,052,538 |
| Value..... | \$514,456 | \$781,460 | \$540,110 |
| Hair felting: | | | |
| Square yards..... | 1,189,999 | 605,214 | 125,000 |
| Value..... | \$531,045 | \$191,998 | \$56,950 |
| All other felts..... | \$3,549,876 | \$2,592,894 | \$2,261,918 |
| All other products..... | \$552,038 | \$665,501 | \$1,172,617 |
| MACHINERY. | | | |
| Sets of cards..... | 473 | 463 | 1302 |
| Woolen..... | 472 | 451 | |
| Cotton..... | 1 | 12 | |
| Spindles..... | 30,353 | 17,817 | 24,286 |
| Producing..... | 29,463 | 17,457 | 23,235 |
| Doubling and twisting..... | 890 | 360 | 1,051 |
| Looms, all classes..... | 408 | 265 | 284 |

¹ Not fully reported.

Hats, fur-felt and wool-felt.—The total output in 1909 of establishments engaged primarily in the manufacture of fur-felt or wool-felt hats was 42,962,508 hats of all varieties, valued at \$47,089,253; in 1904 it was 36,695,952 hats, valued at \$36,604,304; and in 1899, 32,325,564 hats, valued at \$28,546,867. Fur-felt hats, generally known as felt hats, formed 83.5 per cent of the total number in 1909 and 69.9 per cent in 1899, while wool-felt hats, generally known as wool hats, formed 16.5 per cent of the total in 1909 and 30.1 per cent in 1899.

There is some duplication in value of products, due to the use of felt hat bodies and hats in the rough made at one establishment as material at another.

The following table gives the quantity and value of the materials and products of the fur-felt hat industry in 1909, 1904, and 1899. The products increased in value 72.1 per cent during the decade, and the number of finished hats increased 58.8 per cent.

Table 49

| | 1909 | 1904 | 1899 |
|--|--------------|--------------|--------------|
| MATERIALS. | | | |
| Total cost..... | \$32,109,231 | \$15,975,206 | \$13,513,968 |
| Hatters' fur: | | | |
| Pounds..... | 8,645,576 | 6,718,359 | 6,166,269 |
| Cost..... | \$9,278,922 | \$6,743,936 | \$6,376,991 |
| Fur-felt hat bodies and hats in the rough: | | | |
| Dozens..... | 466,447 | 211,760 | 148,212 |
| Cost..... | \$2,575,248 | \$1,351,372 | \$982,986 |
| Chemicals and dyestuffs..... | \$843,587 | \$1,140,281 | \$656,794 |
| All other materials..... | \$9,411,474 | \$6,739,617 | \$5,596,897 |
| PRODUCTS. | | | |
| Total value..... | \$47,089,253 | \$36,604,304 | \$28,546,867 |
| Fur-felt hats: | | | |
| Dozens..... | 2,969,252 | 2,611,875 | 1,882,372 |
| Value..... | \$43,442,466 | \$34,314,234 | \$25,365,506 |
| Fur-felt hat bodies and hats in the rough: | | | |
| Dozens..... | 366,370 | 88,986 | 165,010 |
| Value..... | \$2,703,738 | \$690,959 | \$992,730 |
| All other products..... | \$1,164,872 | \$1,093,361 | \$941,032 |
| Work on materials for others..... | \$553,554 | \$569,799 | \$491,919 |

¹ In addition, in 1909, fur-felt hats, to the value of \$806,651, and in 1904, to the value of \$333,441, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

The statistics for the manufacture of wool-felt hats are given in the following table. The increase in the total value of all products for the decade was 22.1 per cent. The output of finished wool hats in 1909, though greater than in 1904, showed a decrease of 27.2 per cent as compared with 1899.

Table 50

| | 1909 | 1904 | 1899 |
|---|-------------|-------------|-------------|
| MATERIALS. | | | |
| Total cost..... | \$2,472,263 | \$1,369,810 | \$2,042,202 |
| Wool, in condition purchased: | | | |
| Pounds..... | 1,293,498 | 1,633,525 | 2,713,374 |
| Cost..... | \$404,127 | \$495,594 | \$758,973 |
| Equivalent of above in scoured condition, pounds..... | 989,110 | 1,281,576 | 1,898,605 |
| Wool waste and nolls: | | | |
| Pounds..... | 1,281,764 | 257,363 | 862,982 |
| Cost..... | \$661,172 | \$119,467 | \$370,792 |
| Wool-felt hat bodies and hats in the rough: | | | |
| Dozens..... | 21,364 | 12,089 | 4,939 |
| Cost..... | \$53,020 | \$25,997 | \$13,920 |
| Chemicals and dyestuffs..... | \$104,568 | \$63,905 | \$108,562 |
| All other materials..... | \$1,219,441 | \$664,937 | \$760,015 |
| PRODUCTS. | | | |
| Total value..... | \$4,383,411 | \$3,457,266 | \$3,531,940 |
| Wool-felt hats: | | | |
| Dozens..... | 590,957 | 446,121 | 311,425 |
| Value..... | \$3,642,787 | \$2,290,070 | \$3,161,361 |
| Wool-felt hat bodies and hats in the rough: | | | |
| Dozens..... | 53,896 | 18,587 | 56,066 |
| Value..... | \$309,492 | \$100,491 | \$120,262 |
| All other products..... | \$426,132 | \$66,705 | \$310,317 |

¹ In addition, wool-felt hats, to the value of \$904,643, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

Hosiery and knit goods.—Table 51, presenting the statistics for hosiery and knit goods, includes hand-knit as well as machine-knit goods.

The total cost of materials in the hosiery and knit-goods industry was \$110,241,053 in 1909, \$76,789,348 in 1904, and \$51,195,330 in 1899. The cost of cotton and cotton yarn represented 51.7 per cent of the total cost of material used in 1909, 52.4 per cent in 1904, and 50.3 per cent in 1899. A portion of the yarn reported as material was purchased from other establish-

ments included in this classification and is therefore duplicated in the value of products. The increase in the total cost of materials in 1909 over the cost for 1899 was 115.3 per cent, and the increase in the total value of products was 108.8 per cent. Of the total value of the products, shirts and drawers contributed 34.8 per cent in 1909 and 47.7 per cent in 1899, while hosiery contributed 34.3 per cent in 1909 and 28.6 per cent in 1899. The hosiery product increased in value from

\$27,420,029 in 1899 to \$68,721,825 in 1909, or 150.6 per cent, and shirts and drawers from \$45,675,594 to \$69,592,817, or 52.4 per cent. Sweaters, cardigan jackets, etc., show the largest relative increase in value for the decade, and combination suits the next largest, the value of the former increasing from \$3,498,837 to \$22,430,817, or more than fivefold, and that of the latter from \$3,691,847 to \$14,853,536, or about threefold.

| Table 51 | 1909 | 1904 | 1899 | | 1909 | 1904 | 1899 |
|--|----------------------|----------------------|---------------------|--|---------------------|---------------------|--------------------|
| MATERIALS. | | | | PRODUCTS—continued. | | | |
| Total cost..... | \$110,241,053 | \$76,789,348 | \$51,195,330 | Hosiery—Continued. | | | |
| Cotton: | | | | Silk— | | | |
| Pounds..... | 75,418,023 | 50,586,760 | 49,451,301 | Dozen pairs..... | 434,414 | 42,065 | 12,572 |
| Cost..... | \$8,803,509 | \$5,869,317 | \$3,561,592 | Value..... | \$3,600,416 | \$522,303 | \$186,413 |
| Wool, in condition purchased: | | | | Shirts and drawers: | | | |
| Pounds..... | 7,068,788 | 17,800,616 | 17,953,907 | Dozens..... | 25,337,779 | 19,723,141 | 15,873,700 |
| Cost..... | \$2,919,055 | \$6,153,858 | \$5,262,135 | Value..... | \$69,592,817 | \$56,643,860 | \$45,675,594 |
| Equivalent of above in scoured condition, pounds | 5,582,839 | 13,909,144 | 13,031,308 | All cotton— | | | |
| Shoddy, purchased: | | | | Dozens..... | 22,567,121 | 17,107,958 | 12,058,431 |
| Pounds..... | 7,482,553 | 7,489,358 | 3,770,626 | Value..... | \$50,007,598 | \$39,658,762 | \$26,882,902 |
| Cost..... | \$919,970 | \$923,719 | \$488,702 | Merino or mixed— | | | |
| Wool waste and noils, purchased: | | | | Dozens..... | 2,536,473 | 2,113,810 | 2,675,416 |
| Pounds..... | 8,586,261 | 6,020,459 | 5,276,454 | Value..... | \$17,055,624 | \$13,031,754 | \$13,293,829 |
| Cost..... | \$2,813,129 | \$1,711,669 | \$1,487,907 | All wool— | | | |
| Yarns, purchased: | | | | Dozens..... | 178,163 | 485,328 | 1,085,046 |
| Cotton— | | | | Value..... | \$1,820,521 | \$3,647,934 | \$4,980,518 |
| Pounds..... | 216,987,611 | 161,500,466 | 131,820,068 | Silk and silk mixed— | | | |
| Cost..... | \$48,165,749 | \$34,372,910 | \$22,204,918 | Dozens..... | 56,022 | 16,045 | 54,807 |
| Worsted— | | | | Value..... | \$709,074 | \$305,410 | \$518,045 |
| Pounds..... | 10,370,004 | 8,789,570 | 5,823,215 | Combination suits: | | | |
| Cost..... | \$10,116,325 | \$7,457,690 | \$4,865,304 | Dozens..... | 2,473,103 | 1,440,420 | 986,855 |
| Woolen— | | | | Value..... | \$14,863,536 | \$6,793,947 | \$3,691,847 |
| Pounds..... | 6,140,265 | 4,839,343 | 2,621,893 | All cotton— | | | |
| Cost..... | \$3,834,094 | \$2,798,454 | \$1,267,587 | Dozens..... | 2,047,637 | 1,260,301 | 824,632 |
| Merino— | | | | Value..... | \$9,713,597 | \$4,478,664 | \$2,240,566 |
| Pounds..... | 4,014,609 | 2,568,890 | 1,981,484 | Merino or mixed— | | | |
| Cost..... | \$2,667,051 | \$1,118,999 | \$642,535 | Dozens..... | 364,387 | 105,242 | 139,994 |
| Silk and spun silk— | | | | Value..... | \$4,217,432 | \$1,199,949 | \$1,136,528 |
| Pounds..... | 982,753 | 320,671 | 266,247 | All wool— | | | |
| Cost..... | \$3,606,599 | \$1,200,259 | \$946,801 | Dozens..... | 50,102 | 68,067 | 9,501 |
| Chemicals and dyestuffs..... | \$2,541,939 | \$1,677,252 | \$1,023,161 | Value..... | \$683,289 | \$968,132 | \$201,667 |
| All other materials..... | \$23,853,633 | \$13,505,221 | \$9,454,598 | Silk or silk mixed— | | | |
| <i>Yarns made in mill for use therein.</i> | | | | Dozens..... | 10,977 | 6,810 | 12,728 |
| Cotton, pounds..... | 69,171,277 | 39,954,890 | 40,845,880 | Value..... | \$239,218 | \$150,202 | \$116,286 |
| Woolen, pounds..... | 8,316,349 | (¹) | (¹) | Sweaters, cardigan jackets, etc.: | | | |
| Worsted, pounds..... | 223,404 | (¹) | (¹) | Dozens..... | 2,221,410 | 811,629 | 594,090 |
| Merino, pounds..... | 20,856,989 | (¹) | (¹) | Value..... | \$22,430,817 | \$8,345,399 | \$3,498,837 |
| PRODUCTS. | | | | Gloves and mittens: | | | |
| Total value..... | \$200,143,527 | \$137,076,454 | \$95,833,692 | Dozen pairs..... | 2,527,889 | 2,260,508 | 1,898,587 |
| Hosiery: | | | | Value..... | \$7,206,887 | \$5,556,260 | \$4,244,046 |
| Dozen pairs..... | 62,825,069 | 44,186,063 | 20,903,809 | Hoods, scarfs, rubias, etc.: | | | |
| Value..... | \$68,721,825 | \$44,113,260 | \$27,420,029 | Dozens..... | 888,223 | 589,315 | 343,429 |
| Cotton, merino, and woolen— | | | | Value..... | \$3,217,985 | \$1,774,862 | \$1,002,392 |
| Hose— | | | | Shawls: | | | |
| Dozen pairs..... | 34,499,562 | 25,099,813 | 16,641,769 | Dozens..... | 218,023 | 435,306 | 157,622 |
| Value..... | \$37,903,011 | \$26,152,043 | \$16,203,372 | Value..... | \$916,294 | \$1,293,348 | \$328,720 |
| Cotton— | | | | Boot and shoe linings: | | | |
| Dozen pairs..... | 32,499,104 | 24,169,804 | 15,028,173 | Square yards..... | 9,726,770 | 11,768,961 | 10,406,440 |
| Value..... | \$34,078,622 | \$22,764,799 | \$13,275,732 | Value..... | \$1,209,464 | \$1,249,401 | \$2,205,003 |
| Merino or mixed— | | | | Yarns for sale..... | \$1,785,531 | \$1,000,083 | \$498,790 |
| Dozen pairs..... | 834,029 | 746,226 | 436,891 | Cotton— | | | |
| Value..... | \$1,466,283 | \$1,182,164 | \$650,059 | Pounds..... | 7,457,412 | 3,304,615 | 2,419,282 |
| Woolen or worsted— | | | | Value..... | \$1,593,417 | \$654,234 | \$422,100 |
| Dozen pairs..... | 1,166,429 | 1,083,783 | 1,176,705 | Woolen, worsted, and merino— | | | |
| Value..... | \$2,358,106 | \$2,205,080 | \$2,267,681 | Pounds..... | 488,322 | 491,559 | 134,529 |
| Half hose— | | | | Value..... | \$217,114 | \$345,849 | \$76,690 |
| Dozen pairs..... | 27,891,093 | 18,144,185 | 13,249,558 | All other products..... | \$10,118,371 | \$10,306,064 | \$7,268,434 |
| Value..... | \$27,218,398 | \$17,438,914 | \$11,030,244 | MACHINERY. | | | |
| Cotton— | | | | Sets of cards..... | 2,681 | 2,001 | 1,161 |
| Dozen pairs..... | 24,805,917 | 15,223,243 | 11,352,081 | Cotton..... | 1,827 | 1,000 | (¹) |
| Value..... | \$21,831,365 | \$11,821,830 | \$7,900,945 | Woolen..... | 844 | 977 | 1,161 |
| Merino or mixed— | | | | Worsted..... | 10 | 24 | (¹) |
| Dozen pairs..... | 2,023,641 | 1,611,066 | 957,520 | Spindles..... | 736,774 | 603,180 | 521,871 |
| Value..... | \$3,299,912 | \$2,214,678 | \$1,384,764 | Producing..... | 720,035 | 596,362 | 510,172 |
| Woolen or worsted— | | | | Doubling and twisting..... | 6,839 | 6,818 | 11,699 |
| Dozen pairs..... | 1,061,535 | 1,809,876 | 939,957 | Knitting machines, all classes..... | 115,019 | 88,374 | 89,047 |
| Value..... | \$2,087,121 | \$3,402,406 | \$1,738,535 | Sewing machines, all classes..... | 43,885 | 30,410 | 24,535 |

¹ Not reported.

² In addition, in 1909, hosiery and knit goods, to the value of \$2,975,749, and in 1904, to the value of \$1,570,633, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

Oilcloth and linoleum.—Table 52 presents the statistics of the production of oilcloth, linoleum, and artificial leather. Artificial leather, which at former censuses was included under upholstering materials, was reported separately for the first time at the census of 1909. At the census of 1899 oilcloth and linoleum were not reported in detail, but the total value of these products was \$11,402,620. This had

increased to \$13,977,137 in 1904 and to \$22,525,940 in 1909. The production of oilcloth in 1909 was in the aggregate 96,862,068 square yards and in 1904 71,057,684 square yards, an increase for the five years of 36.3 per cent. The linoleum product increased relatively much more; it amounted to 30,676,254 square yards in 1909 and 16,891,462 square yards in 1904, an increase of 81.6 per cent.

| Table 52 | PRODUCT. | 1909 | 1904 |
|----------|----------------------------------|--------------|------------------|
| | Total value | \$26,253,796 | \$14,792,246 |
| | Oilcloth | \$11,681,012 | \$8,648,337 |
| | Floor— | | |
| | Square yards..... | 18,354,851 | 21,456,615 |
| | Value..... | \$3,776,660 | \$3,565,689 |
| | Enameled— | | |
| | Square yards..... | 17,338,440 | 11,574,986 |
| | Value..... | \$2,265,146 | \$1,542,467 |
| | Table— | | |
| | Square yards..... | 61,168,777 | 38,026,083 |
| | Value..... | \$5,639,206 | \$3,540,181 |
| | Linoleum | \$10,844,928 | \$5,328,800 |
| | Linoleum, including cork carpet— | | |
| | Square yards..... | 26,215,979 | 14,765,284 |
| | Value..... | \$7,850,437 | \$4,223,992 |
| | Inlaid linoleum— | | |
| | Square yards..... | 4,460,275 | 2,126,178 |
| | Value..... | \$2,994,491 | \$1,104,808 |
| | Artificial leather: | | |
| | Square yards..... | 11,899,875 | (¹) |
| | Value..... | \$3,448,617 | (¹) |
| | All other products | \$278,239 | \$815,109 |

¹ In addition, products to the value of \$33,328 were reported by establishments engaged primarily in the manufacture of products other than those covered by the industry designation. The production of artificial leather is included under "upholstering materials" in Table 110.

² Figures not available.

Shoddy.—The statistics given in the following table relate only to establishments primarily engaged in the manufacture of shoddy, mungo, and wool extract, and do not include those for spinning and weaving mills and hosiery and knit-goods factories which manufacture shoddy for their own use or for sale. Mills engaged in the cutting of flocks and the cleaning and garnetting of waste are included, as in previous censuses. The total cost of materials used was \$5,000,706 in 1909, and the total value of the products was \$7,446,364, both of these amounts being somewhat larger than in 1899 but smaller than in 1904. The total output of the products specifically classified was 57,888,999 pounds in 1909, 63,787,770 pounds in 1904, and 47,684,714 pounds in 1899.

| Table 53 | 1909 | 1904 | 1899 |
|---|-------------|-------------|------------------|
| MATERIALS. | | | |
| Total cost | \$5,000,706 | \$6,055,731 | \$4,875,192 |
| Tailors' clippings, rags, etc.: | | | |
| Pounds..... | 64,561,713 | 68,921,097 | 79,623,312 |
| Cost..... | \$3,051,045 | \$4,295,641 | \$3,558,706 |
| Waste and noils of wool, mohair, camel's hair, etc.: | | | |
| Pounds..... | 7,567,579 | 8,177,846 | 4,236,028 |
| Cost..... | \$917,976 | \$909,754 | \$693,972 |
| Wool, in condition purchased: | | | |
| Pounds..... | 237,097 | 597,492 | 422,349 |
| Cost..... | \$98,032 | \$127,927 | \$127,099 |
| Equivalent of above in scoured condition, pounds..... | 196,097 | 421,492 | 242,997 |
| Chemicals and dyestuffs..... | \$138,241 | \$142,455 | \$111,065 |
| All other materials..... | \$795,412 | \$579,954 | \$384,320 |
| PRODUCTS. | | | |
| Total value | \$7,446,364 | \$8,406,425 | \$6,730,974 |
| Shoddy and mungo: | | | |
| Pounds..... | 48,375,724 | 54,401,295 | 39,014,661 |
| Value..... | \$5,699,260 | \$6,831,689 | \$5,388,378 |
| Wool extract: | | | |
| Pounds..... | 5,637,514 | 6,375,768 | 4,980,825 |
| Value..... | \$865,528 | \$727,912 | \$620,504 |
| Waste: | | | |
| Pounds..... | 2,237,748 | 42,504 | 1,608,470 |
| Value..... | \$275,545 | \$1,644 | \$145,043 |
| Flocks: | | | |
| Pounds..... | 1,638,013 | 2,968,203 | 2,080,758 |
| Value..... | \$107,097 | \$143,536 | \$131,594 |
| All other products..... | \$268,708 | \$365,805 | \$151,494 |
| Work on materials for others..... | \$229,626 | \$335,939 | \$290,661 |
| MACHINERY. | | | |
| Pickers, number..... | 346 | 317 | (²) |
| Garnett machines, number..... | 158 | 116 | (²) |

¹ In addition, shoddy to the value of \$367,278 was made for sale by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² Not reported.

Silk and silk goods.—The following table, which presents statistics for the manufacture of silk and silk goods, includes data for establishments that make a specialty of throwing and winding silk:

| Table 54 | 1909 | 1904 | 1899 |
|--|---------------|---------------|------------------|
| MATERIALS. | | | |
| Total cost | \$107,766,916 | \$75,861,188 | \$62,406,665 |
| Silk: | | | |
| Raw— | | | |
| Pounds..... | 17,472,204 | 11,572,783 | 9,760,770 |
| Cost..... | \$67,787,037 | \$45,218,416 | \$40,721,877 |
| Spun— | | | |
| Pounds..... | 2,212,972 | 1,951,201 | 1,550,291 |
| Cost..... | \$4,948,789 | \$4,310,061 | \$3,406,099 |
| Artificial— | | | |
| Pounds..... | 914,494 | 496,151 | 6,056 |
| Cost..... | \$1,826,894 | \$1,623,473 | \$19,389 |
| Organzine and tram, purchased— | | | |
| Pounds..... | 3,377,972 | 3,236,744 | 2,338,464 |
| Cost..... | \$14,679,719 | \$14,562,425 | \$10,539,632 |
| Fringe and floss, including waste, noils, etc., purchased— | | | |
| Pounds..... | 2,402,960 | 149,811 | 1,735,179 |
| Cost..... | \$1,637,187 | \$187,159 | \$1,006,047 |
| Yarns, other than silk: | | | |
| Cotton, including mercerized— | | | |
| Pounds..... | 14,111,878 | 9,618,295 | 6,664,069 |
| Cost..... | \$5,811,582 | \$3,667,989 | \$1,996,233 |
| Woolen or worsted— | | | |
| Pounds..... | 610,588 | 443,155 | 229,461 |
| Cost..... | \$765,989 | \$409,867 | \$167,779 |
| Mohair— | | | |
| Pounds..... | 710,108 | 128,289 | 194,819 |
| Cost..... | \$640,829 | \$137,097 | \$107,365 |
| All other— | | | |
| Pounds..... | 353,780 | 130,930 | 108,388 |
| Cost..... | \$456,897 | \$108,841 | \$134,986 |
| Chemicals and dyestuffs..... | \$1,062,313 | \$606,992 | (¹) |
| All other materials..... | \$8,150,280 | \$5,488,868 | \$4,313,416 |
| PRODUCTS. | | | |
| Total value | \$196,911,667 | \$133,283,073 | \$107,264,268 |
| Broad silks: | | | |
| Yards..... | 185,707,316 | 124,871,215 | \$7,626,883 |
| Value..... | \$107,881,146 | \$66,917,762 | \$52,182,816 |
| Plain and fancies— | | | |
| All silk— | | | |
| Yards..... | 81,964,158 | 68,393,042 | 53,573,488 |
| Value..... | \$33,282,704 | \$40,741,480 | \$33,852,111 |
| Silk mixed— | | | |
| Yards..... | 24,742,556 | 9,061,025 | 8,963,315 |
| Value..... | \$14,207,861 | \$5,343,472 | \$5,456,710 |
| Jacquard— | | | |
| All silk— | | | |
| Yards..... | 12,249,090 | 8,143,061 | 7,532,229 |
| Value..... | \$9,835,345 | \$5,927,063 | \$5,379,061 |
| Silk mixed— | | | |
| Yards..... | 6,043,686 | 2,336,120 | 1,677,466 |
| Value..... | \$3,473,799 | \$1,229,648 | \$1,260,321 |
| Piece-dyed— | | | |
| All silk— | | | |
| Yards..... | 19,663,393 | 21,234,584 | 7,331,501 |
| Value..... | \$11,353,242 | \$9,276,445 | \$3,342,167 |
| Silk mixed— | | | |
| Yards..... | 40,044,433 | 15,003,353 | 8,558,824 |
| Value..... | \$15,728,195 | \$4,399,654 | \$2,858,506 |
| Velvets: | | | |
| Yards..... | 10,093,583 | 7,262,315 | 5,122,249 |
| Value..... | \$4,787,990 | \$3,161,206 | \$2,479,908 |
| Pinuses: | | | |
| Yards..... | 2,759,411 | 2,547,367 | 3,848,684 |
| Value..... | \$2,104,768 | \$1,340,815 | \$2,490,068 |
| Tapestries and upholstery: | | | |
| Yards..... | 226,717 | 1,766,219 | 1,333,119 |
| Value..... | \$382,820 | \$1,569,982 | \$1,009,635 |
| Ribbons: | | | |
| Laces, nets, veils, veiling, etc. | \$32,744,873 | \$21,890,604 | \$18,467,179 |
| Embroideries..... | \$1,360,569 | \$745,489 | \$608,104 |
| Fringe and gimps..... | \$485,322 | \$112,362 | \$87,625 |
| Braids and bindings..... | \$224,827 | \$1,016,954 | \$444,787 |
| Trimnings..... | \$4,493,248 | \$3,498,977 | \$1,522,555 |
| Machine twist: | | | |
| Pounds..... | 1,088,780 | 922,968 | 967,917 |
| Value..... | \$6,341,719 | \$5,521,655 | \$5,997,974 |
| Sewing, embroidery, wash, fringe, and floss silks: | | | |
| Pounds..... | 747,246 | 811,711 | 739,301 |
| Value..... | \$4,179,355 | \$4,625,016 | \$4,248,216 |
| Organzine and tram, for sale: | | | |
| Pounds..... | 2,740,319 | 2,025,645 | 2,468,387 |
| Value..... | \$12,550,510 | \$9,190,650 | \$11,167,191 |
| Spun silk, for sale: | | | |
| Pounds..... | 779,462 | 570,529 | 437,459 |
| Value..... | \$2,104,066 | \$1,609,847 | \$1,036,227 |
| All other products..... | \$4,495,675 | \$5,227,800 | \$1,027,472 |
| Work done on materials for others..... | \$8,364,350 | \$3,718,066 | \$2,337,220 |

¹ Does not include waste, noils, etc.

² Not reported separately.

³ In addition, silk and silk goods to the value of \$1,218,101 were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

The increase in the cost of materials and in the value of products for the period 1899-1909 was 72.7 and 83.6 per cent, respectively. Considerable duplication occurs in the total cost of materials and in the total value of products shown in the preceding table. To eliminate this duplication the following method may be used: (1) organzine and tram, reported as material and product, is deducted from both materials and products, respectively; (2) spun silk, reported as a product, is deducted from both materials and products; (3) fringe and floss, reported as material, is deducted from both materials and products; and (4) amount received for contract work, reported as product, is deducted from products.

The total production of broad weaves in 1909 was 198,787,027 running yards, single width, valued at \$115,136,724, compared with 97,940,935 yards, valued at \$58,122,622, in 1899, the increase in quantity being 103 per cent and that in value 98.1 per cent. Broad silks formed over nine-tenths of all broad weaves in 1909, the increase in the output between 1899 and 1909 being 111.9 per cent. The increase in the output of all other broad weaves combined—velvets, plushes, tapestries, and upholsteries—was only 26.9 per cent.

In 1899 all-silk goods constituted 78.1 per cent of the broad-silk product, and silk-mixed goods 21.9 per cent, whereas in 1909 the proportion for the latter had risen to 38.1 per cent and that for the former had fallen to 61.9 per cent. The change was due to an increase during the decade of 268.9 per cent in the output of silk-mixed broad silks, while that for all-silk was only 67.9 per cent.

Between 1899 and 1909 the rate of increase in the

output of broad woven silk goods was much greater than that for either broad woven cotton or broad woven woolen goods, the increases for the three classes being 103, 40.3, and 33.8 per cent, respectively.

Woolen and worsted goods.—The following table presents statistics for establishments engaged primarily in the manufacture of woolen and worsted goods. The total value of products for the industry involves considerable duplication, due to the use of partly finished products of some establishments as material for others. In 1909 the establishments in this industry produced 570,743,797 square yards of woven goods, exclusive of upholstery goods and sundries, compared with 505,821,956 square yards in 1904 and 426,572,856 in 1899, the increase for the decade being 33.8 per cent. The value of these goods was \$296,447,594 in 1909, \$234,737,036 in 1904, and \$183,306,664 in 1899, an increase for the decade of 61.7 per cent. The highest rate of increase was reported for the all-wool woven group, the output of which increased 49.3 per cent in quantity. The output of unions decreased decidedly, while that of cotton-warp woven goods increased 37.6 per cent in quantity. The all-wool yardage constituted 56.6 per cent of the total in 1909 and 50.7 per cent in 1899, while the union yardage constituted 6.6 per cent of the total in 1909, as compared with 13.4 per cent in 1899. Cotton-warp fabrics formed about the same proportion of the total in both years—somewhat over one-third. There has thus been a considerable shift during the decade from the manufacture of cotton-mixed to that of all-wool goods.

| Table 55 | 1909 | 1904 | 1899 | | 1909 | 1904 | 1899 |
|-----------------------------------|----------------------|----------------------|----------------------|-------------------------------|----------------------|----------------------|----------------------|
| MATERIALS. | | | | MATERIALS—continued. | | | |
| Total cost..... | \$273,438,570 | \$197,489,308 | \$148,087,178 | Yarns purchased: | | | |
| Wool: | | | | Woolen— | | | |
| In condition purchased— | | | | Pounds..... | 931,222 | 5,750,088 | 5,906,862 |
| Pounds..... | 474,755,366 | 418,703,811 | 330,178,552 | Cost..... | \$558,270 | \$2,622,882 | \$2,675,143 |
| Cost..... | \$136,666,917 | \$105,433,451 | \$78,803,830 | Worsted— | | | |
| Domestic— | | | | Pounds..... | 59,148,771 | 31,047,516 | 25,110,939 |
| Pounds..... | 310,602,279 | 319,800,490 | 250,393,205 | Cost..... | \$56,033,701 | \$24,904,511 | \$19,495,251 |
| Cost..... | \$85,018,238 | \$78,673,136 | \$59,046,153 | Merino— | | | |
| Foreign— | | | | Pounds..... | 1,971,709 | 2,458,085 | 3,634,679 |
| Pounds..... | 104,153,087 | 98,903,321 | 79,785,347 | Cost..... | \$318,450 | \$581,107 | \$664,527 |
| Cost..... | \$51,648,679 | \$26,700,315 | \$19,757,672 | Cotton— | | | |
| Equivalent in scoured condition, | | | | Pounds..... | 39,169,388 | 32,598,072 | 35,342,726 |
| pounds..... | 290,706,970 | 241,280,065 | 192,705,519 | Cost..... | \$10,402,185 | \$5,032,773 | \$6,814,279 |
| Mohair, camel, alpaca, and vicuña | | | | Silk and spun silk— | | | |
| hair: | | | | Pounds..... | 282,536 | 412,307 | 131,915 |
| Pounds..... | 7,805,422 | 6,507,631 | 5,003,906 | Cost..... | \$1,142,603 | \$1,679,883 | \$529,789 |
| Cost..... | \$2,399,123 | \$1,957,581 | \$1,857,707 | All other— | | | |
| Cow and other animal hair: | | | | Pounds..... | 1,040,735 | 411,779 | 1,127,926 |
| Pounds..... | 17,355,100 | 22,987,332 | 20,535,075 | Cost..... | \$40,739 | \$21,118 | \$55,434 |
| Cost..... | \$932,911 | \$1,369,776 | \$1,170,759 | Chemicals and dyestuffs..... | \$8,820,928 | \$7,450,550 | \$5,595,100 |
| Cotton: | | | | All other materials..... | \$25,404,278 | \$13,086,102 | \$15,307,551 |
| Pounds..... | 20,024,061 | 32,013,408 | 40,244,710 | | | | |
| Cost..... | \$2,515,409 | \$4,072,907 | \$3,280,000 | PRODUCTS. | | | |
| Tailor's clippings, rags, etc.: | | | | Total value..... | \$419,743,521 | \$307,941,710 | \$238,744,503 |
| Pounds..... | 40,402,460 | 79,367,290 | (1) | All-wool woven goods: | | | |
| Cost..... | \$2,855,966 | \$5,668,634 | (1) | Square yards..... | 322,944,365 | 200,567,488 | 216,359,702 |
| Shoddy, mungo, and wool extract | | | | Value..... | \$219,853,767 | \$159,390,336 | \$117,757,109 |
| purchased: | | | | Wool cloths, doeskins, cassi- | | | |
| Pounds..... | 21,454,187 | 31,819,456 | 33,036,767 | meres, chevriots, etc.— | | | |
| Cost..... | \$3,058,214 | \$4,472,696 | \$4,070,836 | Square yards..... | 40,843,079 | 42,487,566 | 34,299,426 |
| Waste and noils of wool, mohair, | | | | Value..... | \$29,291,059 | \$29,556,252 | \$22,645,869 |
| camel's hair, etc., purchased: | | | | Worsted coatings, serges, and | | | |
| Pounds..... | 26,473,311 | 26,032,838 | 15,714,171 | suitings— | | | |
| Cost..... | \$7,523,283 | \$6,056,227 | \$3,891,309 | Square yards..... | 110,655,009 | 59,592,611 | 54,033,679 |
| Tops purchased: | | | | Value..... | \$101,908,153 | \$56,731,196 | \$43,008,560 |
| Pounds..... | 20,823,245 | 9,160,929 | 5,506,108 | | | | |
| Cost..... | \$14,614,527 | \$5,073,078 | \$2,865,546 | | | | |

1 Not reported separately.

In addition, in 1909, woolen and worsted goods, to the value of \$1,281,292, and in 1904, to the value of \$302,966, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

| Table 55—Continued. | 1909 | 1904 | 1899 | Table 55—Continued. | 1909 | 1904 | 1899 |
|--|--------------|--------------|--------------|--|--------------|--------------|--------------|
| PRODUCTS—continued. | | | | PRODUCTS—continued. | | | |
| All-wool woven goods—Continued. | | | | Cotton-warp woven goods—Contd. | | | |
| Woolen overcoatings, cloakings, kerseys, etc.— | | | | Worsted filling dress goods, cashmeres, serges, mohairs, etc.— | | | |
| Square yards..... | 14,697,770 | 22,411,530 | 18,729,194 | Square yards..... | 65,112,981 | 49,300,369 | 45,784,011 |
| Value..... | \$11,230,856 | \$10,934,112 | \$16,131,709 | Value..... | \$14,798,965 | \$12,711,554 | \$10,423,206 |
| Worsted overcoatings and cloakings— | | | | Wool filling dress goods, and repellents— | | | |
| Square yards..... | 654,404 | 1,057,668 | 877,133 | Square yards..... | 12,916,069 | 12,139,080 | 7,496,868 |
| Value..... | \$821,688 | \$546,170 | \$567,390 | Value..... | \$2,741,816 | \$3,230,561 | \$1,890,468 |
| Wool dress goods, sackings, tricots, etc., and opera and similar flannels— | | | | Domest flannels and shirtings— | | | |
| Square yards..... | 29,099,956 | 48,874,396 | 33,594,212 | Square yards..... | 4,571,765 | 4,285,838 | 4,555,013 |
| Value..... | \$16,385,498 | \$19,826,017 | \$12,976,489 | Value..... | \$911,967 | \$769,476 | \$976,465 |
| Worsted dress goods, cashmeres, serges, bunting, etc.— | | | | Linings, Italian cloths, and lastings— | | | |
| Square yards..... | 105,801,349 | 66,428,825 | 57,712,086 | Square yards..... | 28,928,148 | 17,619,325 | 10,157,030 |
| Value..... | \$54,030,376 | \$27,802,181 | \$16,316,392 | Value..... | \$9,008,799 | \$4,505,927 | \$2,228,434 |
| Carriage cloths— | | | | Blankets— | | | |
| Square yards..... | 1,782,855 | 1,741,765 | 1,220,408 | Square yards..... | 9,746,541 | 9,267,144 | 11,107,104 |
| Value..... | \$947,862 | \$964,557 | \$696,999 | Value..... | \$2,684,919 | \$2,218,243 | \$2,241,342 |
| Flannels for underwear— | | | | Horse blankets— | | | |
| Square yards..... | 3,856,353 | 8,710,131 | 9,324,720 | Square yards..... | 4,210,098 | 6,307,836 | 5,792,315 |
| Value..... | \$1,257,271 | \$2,045,858 | \$2,344,559 | Value..... | \$1,676,942 | \$1,083,154 | \$1,252,824 |
| Blankets— | | | | Carriage robes— | | | |
| Square yards..... | 5,137,903 | 7,316,179 | 5,454,173 | Square yards..... | 2,889,444 | 1,309,166 | 1,250,233 |
| Value..... | \$3,228,797 | \$2,751,029 | \$2,316,968 | Value..... | \$1,396,585 | \$1,139,217 | \$815,233 |
| Horse blankets— | | | | All other— | | | |
| Square yards..... | 247,395 | 740,237 | 514,952 | Square yards..... | 327,664 | | 32,576 |
| Value..... | \$185,430 | \$418,210 | \$256,211 | Value..... | \$245,389 | | \$14,150 |
| Woven shawls— | | | | Upholstering goods and sundries— | | | |
| Square yards..... | 704,153 | 895,777 | 600,104 | Woolen and worsted— | | | |
| Value..... | \$404,583 | \$557,370 | \$300,523 | Square yards..... | 1,176,542 | 1,060,739 | 447,568 |
| All other— | | | | Value..... | \$1,628,648 | \$908,937 | \$742,121 |
| Square yards..... | 463,179 | 310,603 | 615 | All other— | | | |
| Value..... | \$167,194 | \$257,375 | \$510 | Partially manufactured products for sale | | | |
| Union, or cotton mixed, woven goods: | | | | Yarns: | | | |
| Square yards..... | 37,453,351 | 63,197,407 | 57,334,570 | Woolen— | | | |
| Value..... | \$14,327,973 | \$26,288,407 | \$23,111,698 | Pounds..... | 28,520,493 | 42,878,320 | 32,699,551 |
| Unions, tweeds, chevots, cassimeres, etc.— | | | | Value..... | \$7,565,412 | \$9,393,894 | \$6,904,626 |
| Square yards..... | 18,917,478 | 35,103,110 | 30,767,915 | Worsted— | | | |
| Value..... | \$7,780,854 | \$15,050,726 | \$13,695,830 | Pounds..... | 88,323,953 | 55,475,235 | 143,003,343 |
| Overcoatings and cloakings— | | | | Value..... | \$80,395,543 | \$40,142,677 | \$30,081,425 |
| Square yards..... | 4,281,739 | 5,373,053 | 6,087,366 | Woolen, union or merino— | | | |
| Value..... | \$2,363,381 | \$3,353,758 | \$3,515,613 | Pounds..... | 10,249,625 | 8,824,664 | |
| Sackings, tricots, dress goods, and opera and similar flannels— | | | | Value..... | \$2,143,416 | \$2,538,018 | 15,374,567 |
| Square yards..... | 4,319,539 | 11,690,740 | 11,178,752 | Worsted, union or merino— | | | |
| Value..... | \$1,776,721 | \$4,926,596 | \$3,669,584 | Pounds..... | 3,761,737 | 3,314,549 | 4,668,125 |
| Flannels for underwear— | | | | Value..... | \$3,522,812 | \$2,460,558 | |
| Square yards..... | 7,063,572 | 7,273,761 | 6,217,094 | All other— | | | |
| Value..... | \$1,308,369 | \$1,528,928 | \$1,284,578 | Pounds..... | 3,195,553 | 2,799,060 | 4,536,155 |
| Blankets— | | | | Value..... | \$974,570 | \$1,162,735 | \$1,451,390 |
| Square yards..... | 1,717,758 | 3,114,110 | 1,530,696 | Worsted tops and slubbing— | | | |
| Value..... | \$650,714 | \$1,198,706 | \$561,649 | Pounds..... | 11,321,279 | 4,772,582 | (1) |
| All other— | | | | Value..... | \$8,027,231 | \$2,855,171 | (2) |
| Square yards..... | 1,153,265 | 642,633 | 1,554,747 | Noils— | | | |
| Value..... | \$447,634 | \$229,693 | \$381,442 | Pounds..... | 27,479,293 | 15,379,600 | 12,176,843 |
| Cotton-warp woven goods: | | | | Value..... | \$8,938,589 | \$4,865,976 | \$3,354,187 |
| Square yards..... | 210,346,081 | 182,057,061 | 152,878,584 | Waste— | | | |
| Value..... | \$62,265,854 | \$50,058,293 | \$42,437,799 | Pounds..... | 24,057,580 | 17,946,076 | 8,153,294 |
| Wool filling cassimeres, doeskins, jeans, tweeds, coatings, etc.— | | | | Value..... | \$3,624,912 | \$2,448,183 | \$1,229,669 |
| Square yards..... | 45,244,866 | 34,602,165 | 37,160,449 | All other products..... | | | |
| Value..... | \$12,107,320 | \$10,877,081 | \$11,024,638 | Work on materials for others..... | | | |
| Worsted filling cassimeres, doeskins, jeans, tweeds, coatings, etc.— | | | | | | | |
| Square yards..... | 29,220,252 | 16,688,620 | 12,663,719 | MACHINERY. | | | |
| Value..... | \$15,009,081 | \$6,969,402 | \$7,267,508 | Sets of cards..... | | | |
| Wool filling overcoatings and cloakings— | | | | Woolen..... | 6,315 | 6,990 | 15,695 |
| Square yards..... | 2,075,502 | 8,198,406 | 3,917,498 | Worsted..... | 4,500 | 5,178 | |
| Value..... | \$771,879 | \$2,478,878 | \$1,430,430 | Cotton..... | 1,581 | 1,387 | |
| Satinets and linseys— | | | | Spindles..... | 234 | 234 | |
| Square yards..... | 5,102,460 | 22,339,112 | 13,051,729 | Producing..... | 4,287,640 | 3,747,684 | 3,777,607 |
| Value..... | \$912,182 | \$4,074,800 | \$2,873,181 | Doubling and twisting..... | 3,553,194 | 2,228,423 | 2,873,528 |
| | | | | Looms, all classes..... | 724,446 | 519,511 | 404,679 |
| | | | | Wool-combing machines..... | 72,522 | 63,867 | 61,395 |
| | | | | | 1,978 | 1,440 | 1,317 |

1 Worsted tops and slubbing included with worsted yarn.

2 Cards not fully reported.

IRON AND STEEL.

Tables 56 to 61, inclusive, present statistics for blast furnaces, steel works and rolling mills, tin and terne plate plants, and wire mills. In many establishments other industries are carried on in connection with the operations of steel works and rolling mills. In these cases a separation of the data for the industries as defined by the Census Bureau was secured by taking separate reports for the different departments of the respective establishments. In this way the statistics for blast furnaces operated in connection with steel

works were segregated and combined with those for furnaces independently operated, and the statistics for the tin and terne plate dipping departments of establishments which also roll the black plate were separated and combined with those for establishments which dip only purchased plate. Statistics for the finished wire products of mills which roll wire rods as well as draw wire and manufacture wire nails, fencing, etc., were secured and are given in combination with those for wire mills which manufacture only from purchased wire rods. The finished wire products manu-

factured in rolling mills are, however, included in the products of these mills, so that the statistics for wire mills and rolling mills to this extent duplicate each other. It should also be explained that the rolling-mill departments of tin and terne plate establishments are credited with their entire output of black plate, as if it were produced for sale instead of for further treatment at the same establishment.

Blast furnaces.—The statistics for the blast-furnace industry are given in the following table.

In 1909, 25,651,798 tons of pig iron, valued at \$387,830,443, were produced and in 1899, 14,447,791 tons, valued at \$206,512,755, the increase in quantity during the decade being 77.5 per cent and that in value 87.8 per cent. Since 1904 was a year of par-

tial depression in the iron and steel industry and the pig-iron product was less in that year than in 1903 or 1902, neither the small increases shown in quantity and value for 1904 as compared with 1899 nor the large increases shown for 1909 as compared with 1904 are representative of the normal rate of growth for the industry. Features in the development of the industry are the increase in the proportion of pig iron produced for consumption in other departments of the works of the producing company and the increase in the proportion of the product passed on in a molten condition to undergo further processes without being cast into pigs. The *ton of 2,240 pounds* is used in showing quantities except when otherwise stated.

| Table 56 | 1909 | 1904 ¹ | 1899 ¹ | | 1909 | 1904 ¹ | 1899 ¹ |
|---|---------------|-------------------|-------------------|---|---------------|-------------------|-------------------|
| MATERIALS. | | | | PRODUCTS—continued. | | | |
| Total cost | \$320,637,889 | \$178,941,918 | \$181,503,655 | <i>Pig iron, classified according to disposition—Continued.</i> | | | |
| Iron ore: | | | | Produced for sale— | | | |
| Tons..... | 48,353,677 | 30,032,862 | 25,366,894 | Tons..... | 9,793,595 | 6,697,089 | (^e) |
| Cost..... | \$187,264,601 | \$100,945,369 | \$95,902,922 | Value..... | \$143,443,426 | \$90,043,530 | (^e) |
| Domestic— | | | | <i>Pig iron, classified by grades (tons):</i> | | | |
| Tons..... | 46,605,930 | 29,202,944 | 24,612,511 | Bessemer, (0.04 to 0.10 per cent | | | |
| Cost..... | \$177,589,789 | \$96,206,240 | \$91,795,473 | in phosphorus)..... | 10,147,052 | 8,894,584 | 8,475,530 |
| Foreign— | | | | Low phosphorus (below 0.04 per | | | |
| Tons..... | 1,747,747 | 829,918 | 754,383 | cent in phosphorus)..... | 248,720 | 192,795 | (^e) |
| Cost..... | \$9,074,812 | \$4,739,123 | \$4,107,449 | Basic..... | 7,741,759 | 2,553,940 | 937,439 |
| Mill clinder, scrap, etc.: | | | | Foundry..... | 5,539,410 | 3,675,810 | 3,510,300 |
| Tons..... | 1,982,530 | 1,865,385 | 1,600,313 | Forge or mill..... | 580,085 | 601,677 | 1,057,616 |
| Cost..... | \$5,544,859 | \$3,830,961 | \$3,772,385 | Malleable Bessemer..... | 934,211 | 316,964 | (^e) |
| Fluxes: | | | | White, mottled, and miscellane- | | | |
| Tons..... | 13,570,845 | 8,325,209 | 7,324,743 | ous..... | 110,810 | 98,627 | 208,323 |
| Cost..... | \$12,230,493 | \$6,888,647 | \$5,054,725 | Direct castings..... | 16,181 | 9,409 | 7,123 |
| Fuel,² | | | | Ferrolloys..... | 329,970 | 280,259 | 251,460 |
| Coke— | | | | Spiegeleisen..... | 142,223 | 109,030 | 163,672 |
| Tons (2,000 pounds)..... | 31,436,536 | 19,739,071 | 16,461,533 | Ferromanganese..... | 82,208 | 57,072 | 51,878 |
| Cost..... | \$102,134,423 | \$57,126,997 | \$38,976,770 | Ferrosilicon, including Besse- | | | |
| Charcoal— | | | | mer ferrosilicon (7 per cent | | | |
| Bushels..... | 38,032,618 | \$ 37,273,569 | 30,677,585 | or over in silicon) and ferro- | | | |
| Cost..... | \$2,787,026 | \$ 2,521,887 | \$1,823,881 | phosphorus..... | 102,539 | 53,557 | 35,910 |
| Anthracite coal ³ — | | | | <i>Pig iron, classified by method of delivery</i> | | | |
| Tons..... | 265,401 | 500,037 | 880,504 | or casting (tons): | | | |
| Cost..... | \$904,102 | \$1,812,779 | \$2,297,419 | Delivered in molten condition... | 12,197,686 | 5,898,744 | (^e) |
| Bituminous coal ³ — | | | | Sand cast..... | 7,655,508 | 6,078,844 | (^e) |
| Tons..... | 102,833 | 801,640 | 832,235 | Machine cast..... | 5,090,797 | 4,307,108 | (^e) |
| Cost..... | \$168,561 | \$1,340,997 | \$1,101,312 | Chill cast..... | 685,566 | 329,460 | (^e) |
| All other materials..... | \$9,594,824 | \$4,474,281 | \$12,574,241 | Direct castings..... | 16,181 | 9,469 | 7,123 |
| PRODUCTS. | | | | EQUIPMENT. | | | |
| Total value | \$391,429,293 | \$231,822,707 | \$206,756,557 | Furnaces in active establishments: | | | |
| Pig iron: | | | | Completed stacks at end of year— | | | |
| Tons..... | 25,651,798 | 16,023,025 | 14,447,791 | Number..... | 388 | 343 | 343 |
| Value..... | \$387,830,443 | \$228,911,116 | \$206,512,755 | Daily capacity, tons..... | 101,447 | 78,180 | 54,425 |
| All other products..... | \$3,598,840 | \$2,911,591 | \$243,802 | Active during the year— | | | |
| <i>Pig iron, classified according to fuel used:</i> | | | | Number..... | 370 | 317 | 325 |
| Bituminous, chiefly coke— | | | | Daily capacity, tons..... | 98,973 | 73,884 | (^e) |
| Tons..... | 4 24,008,572 | 14,909,029 | 12,253,818 | In course of construction at end | | | |
| Value..... | \$309,684,636 | \$203,814,049 | \$173,763,091 | of year— | | | |
| Anthracite coal and coke mixed | | | | Number..... | 10 | 4 | 16 |
| and anthracite alone— | | | | Daily capacity, tons..... | 4,100 | 1,375 | 7,275 |
| Tons..... | 670,991 | 1,305,094 | 1,841,857 | Pig-casting machines, number..... | | (^e) | (^e) |
| Value..... | \$10,962,150 | \$18,103,982 | \$26,678,705 | Granulated slag pits: | | | |
| Charcoal— | | | | Number..... | 104 | (^e) | (^e) |
| Tons..... | 372,235 | 409,502 | \$ 352,116 | Annual capacity, tons..... | 85 | 47 | (^e) |
| Value..... | \$7,183,657 | \$6,993,085 | \$6,070,959 | Gas engines operated with blast-fur- | | | |
| <i>Pig iron, classified according to dispo-</i> | | | | nace gas: | | | |
| Produced for consumption in | | | | Number..... | 85 | (^e) | (^e) |
| works of company reporting— | | | | Horsepower..... | 198,040 | (^e) | (^e) |
| Tons..... | 15,858,203 | 9,920,545 | (^e) | | | | |
| Value..... | \$239,387,017 | \$138,867,586 | (^e) | | | | |

¹ Not including the statistics for a blast furnace operated by a penal institution.

² The figures for 1909 cover fuel for smelting only; those for 1904 and 1899 include fuel for steam raising.

³ Not including 2,486,700 bushels of charcoal and its value, the cost of stumpage and labor being reported as expense.

⁴ Coal and coke mixed, 86,420 tons; balance coke.

⁵ Includes 52,992 tons of mixed charcoal and coke pig iron.

⁶ Not reported.

Steel works and rolling mills.—Table 57 presents comparative statistics of steel works and rolling mills, including those of forges and bloomeries. Section I of the table deals with materials. The second section deals with products. It shows separately each of the products properly designated as rolled and forged steel

and iron, but contains also a miscellaneous item, which includes the value added to such products in their conversion into more highly manufactured articles by the same establishment, so that the total includes the entire value of output of the establishments in the industry. This total and also the separate total for

rolled and forged products alone include no duplication of quantity or value of products within any given establishment itself, but there is considerable duplication due to the use of the product of one establishment as raw material for another establishment, whether the latter be owned by a separate concern or by the same company.

Section III of the table, headed "Steel," gives the entire quantity of crude steel produced by the steel works, including that subjected to further processes of manufacture whether by the establishment in which produced or by other establishments. The value of this steel appears, therefore, distributed among various items under Section II. Section IV of the table gives in detail the quantity and value of the more highly elaborated products made by the rolling mills themselves from the rolling-mill products specified in Section II. The entire value of these products appears in Section II, either as part of the various items of rolled products or in the miscellaneous item of value added to rolling-mill products by further manufacture. The fifth section of the table deals with products sold for export by rolling-mill concerns; it includes only the products so sold directly by the establishments producing them and not such as may be sent abroad by others who purchase from the manufacturer. The sixth section deals with equipment.

In 1909 the rolled, forged, and cast-steel products specifically classified aggregated 26,723,274 tons, valued at \$863,342,711, and in 1899, 15,055,626 tons, valued at \$510,906,040, the increase in tonnage being 77.5 per cent and in value 69 per cent. The *ton of 2,240 pounds* is used in showing quantities except when otherwise stated.

| Table 57 | 1909 | 1904 | 1899 |
|---|---------------|------------------|------------------|
| I. MATERIALS. | | | |
| Total cost..... | \$657,500,858 | \$441,204,432 | \$390,895,277 |
| Iron and steel:— | | | |
| For furnaces and hot-rolls— | | | |
| Tons..... | 30,388,755 | 22,235,682 | 18,414,717 |
| Cost..... | \$515,769,888 | \$349,971,512 | \$315,726,895 |
| Pig iron and ferroalloys— | | | |
| Tons..... | 19,076,889 | 12,191,228 | 10,411,281 |
| Cost..... | \$297,471,122 | \$172,101,436 | \$151,064,348 |
| Pig iron— | | | |
| Tons..... | 18,712,304 | (¹) | (¹) |
| Cost..... | \$282,663,740 | (¹) | (¹) |
| Ferroalloys—spiegeleisen, ferro-manganese, etc.— | | | |
| Tons..... | 364,585 | (¹) | (¹) |
| Cost..... | \$14,807,382 | (¹) | (¹) |
| Scrap, including old rails not intended for re-rolling— | | | |
| Tons..... | 4,803,617 | 5,124,277 | 4,126,980 |
| Cost..... | \$72,722,831 | \$67,601,248 | \$66,852,621 |
| Ingots, blooms, billets, slabs, muck and scrap bar, re-rolling rails, and sheet and tin-plate bars— | | | |
| Tons..... | 6,508,249 | 4,920,177 | 3,876,456 |
| Cost..... | \$145,876,635 | \$110,268,828 | \$97,809,926 |
| Rolled forms for further manufacture— | | | |
| Skelp— | | | |
| Tons..... | 176,717 | 259,643 | (¹) |
| Cost..... | \$5,704,856 | \$7,331,935 | (¹) |
| Wire rods— | | | |
| Tons..... | 146,425 | 161,914 | 136,725 |
| Cost..... | \$4,252,695 | \$4,774,383 | \$5,419,617 |
| Iron ore: | | | |
| Tons..... | 835,338 | 549,995 | 346,310 |
| Cost..... | \$4,292,963 | \$2,396,792 | \$1,348,809 |
| All other materials..... | \$127,480,754 | \$76,729,810 | \$68,399,956 |

| Table 57—Continued. | 1909 | 1904 | 1899 |
|---|---------------|---------------|------------------|
| II. PRODUCTS. | | | |
| Total value..... | \$985,722,534 | \$673,965,026 | \$597,211,716 |
| Rolled, forged, and other classified products, steel and iron: | | | |
| Tons..... | 26,723,274 | 18,218,233 | 15,055,626 |
| Value..... | \$863,342,711 | \$585,288,243 | \$510,906,040 |
| Rails— | | | |
| Tons..... | 2,858,599 | 2,194,605 | 2,261,337 |
| Value..... | \$81,128,295 | \$56,256,759 | \$46,533,159 |
| Bessemer steel— | | | |
| Tons..... | 1,643,527 | 2,065,024 | |
| Value..... | \$44,727,515 | \$64,627,488 | |
| Open-hearth steel, basic— | | | |
| Tons..... | 1,215,072 | 128,681 | 2,230,457 |
| Value..... | \$36,400,780 | \$3,608,562 | \$46,593,979 |
| Re-rolled or renewed rails— | | | |
| Tons..... | 106,352 | 99,530 | (¹) |
| Value..... | \$2,653,017 | \$2,490,328 | (¹) |
| Rail fastenings (splice bars, tie-plates, fishplates, etc.)— | | | |
| Tons..... | 396,911 | 174,655 | (¹) |
| Value..... | \$14,488,412 | \$5,663,652 | (¹) |
| Structural shapes, not including plates used for making girders— | | | |
| Tons..... | 2,123,630 | 964,557 | 856,963 |
| Value..... | \$65,564,593 | \$32,730,901 | \$29,361,522 |
| Steel— | | | |
| Tons..... | 2,102,300 | 959,062 | 829,892 |
| Value..... | \$64,838,496 | \$32,685,701 | \$28,309,966 |
| Open-hearth— | | | |
| Tons..... | 1,934,230 | 618,391 | 566,032 |
| Value..... | \$59,789,948 | \$21,496,531 | \$19,928,249 |
| Bessemer— | | | |
| Tons..... | 168,070 | 331,671 | 263,860 |
| Value..... | \$5,063,548 | \$11,089,170 | \$8,381,717 |
| Iron— | | | |
| Tons..... | 21,330 | 4,475 | 27,991 |
| Value..... | \$711,127 | \$145,200 | \$1,661,556 |
| Bars and rods, including merchant, shovel, finger, and horse-shoe bars, spike, chain bolt, and nut rods, etc. (but not including wire rods, sheet and tin-plate bars, splice bars, and bars for reinforced concrete): | | | |
| Tons..... | 3,784,248 | | |
| Value..... | \$121,488,423 | | |
| Bars for reinforced concrete: | | | |
| Tons..... | 191,358 | 2,442,810 | 2,432,159 |
| Value..... | \$3,588,963 | \$84,068,122 | \$106,597,221 |
| Wire rods: | | | |
| Tons..... | 2,296,279 | 1,792,704 | 916,587 |
| Value..... | \$61,947,958 | \$52,966,031 | \$35,529,529 |
| Plates and sheets, not including black plates or sheets for tinning, nail and tack plates, tie-plates, fishplates or armor plates: | | | |
| Tons..... | 3,332,733 | 1,856,469 | 1,468,066 |
| Value..... | \$133,272,308 | \$77,802,061 | \$68,109,223 |
| Black plates, or sheets, for tinning: | | | |
| Tons..... | 621,435 | 504,025 | 394,014 |
| Value..... | \$30,955,967 | \$25,297,079 | \$20,967,806 |
| Skelp, flue and pipe: | | | |
| Tons..... | 2,084,286 | 1,537,690 | |
| Value..... | \$64,514,728 | \$40,780,202 | |
| Hoops, bands, and cotton ties: | | | |
| Tons..... | 341,043 | 337,223 | 1,195,189 |
| Value..... | \$10,429,681 | \$12,760,040 | \$49,159,747 |
| Nail and tack plates: | | | |
| Tons..... | 68,557 | 86,691 | 97,664 |
| Value..... | \$2,540,022 | \$2,482,076 | \$3,116,558 |
| Axles, car, locomotive, automobile, wagon, carriage, etc., rolled or forged: | | | |
| Tons..... | 102,348 | 83,585 | 102,606 |
| Value..... | \$3,831,344 | \$2,875,529 | \$4,482,937 |
| Armor plates, gun forgings, and ordnance: | | | |
| Tons..... | 26,845 | 24,423 | 15,302 |
| Value..... | \$10,649,679 | \$10,549,620 | \$7,526,479 |
| Blooms, billets, and slabs, produced for sale or for transfer to other works of same company: | | | |
| Tons..... | 4,887,796 | | |
| Value..... | \$108,514,747 | | |
| Rolled forging blooms and billets produced for sale or for transfer to other works of same company: | | | |
| Tons..... | 84,383 | 4,823,585 | 4,172,266 |
| Value..... | \$2,247,133 | \$109,611,104 | \$96,321,587 |
| Sheet and tin-plate bars produced for sale or for transfer to other works of same company: | | | |
| Tons..... | 1,652,761 | | |
| Value..... | \$37,745,269 | | |
| Muck and scrap bar produced for sale or for transfer to other works of same company: | | | |
| Tons..... | 174,496 | 150,926 | 203,681 |
| Value..... | \$4,966,211 | \$3,940,568 | \$5,940,587 |
| All other rolled steel or iron: | | | |
| Tons..... | 566,627 | 377,665 | 506,880 |
| Value..... | \$39,570,061 | \$16,743,727 | \$19,302,606 |

For footnotes, see page 490.

| Table 57—Continued. | 1909 | 1904 | 1899 | | 1909 | 1904 | 1899 |
|--|---------------|---------------|---------------|--|--------------|-------------|--------|
| II. PRODUCTS—continued. | | | | IV. MANUFACTURES FROM ROLLING-MILL PRODUCTS—continued. | | | |
| Rolled, forged, and other classified products, steel and iron—Continued. | | | | Horse and mule shoes: | | | |
| Ingot produced for sale or for transfer to other works of same company: | | | | Kegs (200 pounds)..... | 996,383 | 768,253 | (?) |
| Tons..... | 142,745 | 196,404 | 103,707 | Value..... | \$7,202,897 | \$5,483,137 | (?) |
| Value..... | \$3,593,726 | \$3,985,310 | \$2,781,145 | Springs, car, furniture, and all other, not including wire springs: | | | |
| Direct steel castings: | | | | Tons..... | 6,191 | 22,022 | (?) |
| Tons..... | 504,850 | 287,325 | 177,156 | Value..... | \$374,924 | \$1,708,632 | (?) |
| Value..... | \$38,862,448 | \$20,600,136 | \$14,609,893 | Switches, frogs, crossings, etc.: | | | |
| All other forged steel and iron, not including remanufactures of rolling-mill products: | | | | Tons..... | 28,008 | (?) | (?) |
| Tons..... | 365,086 | 274,061 | 81,009 | Value..... | \$2,471,008 | (?) | (?) |
| Value..... | \$18,740,241 | \$15,684,907 | \$6,665,741 | Galvanized plates or sheets: | | | |
| All other products..... | \$122,379,823 | \$88,676,783 | \$80,305,676 | Tons..... | 431,658 | (?) | (?) |
| Miscellaneous steel and iron products not rolled, including value added to iron and steel rolling-mill products by further manufacture | | | | Value..... | \$25,912,056 | (?) | (?) |
| ..... | \$86,534,369 | \$61,977,284 | (?) | Stamped ware: | | | |
| Scrap steel or iron produced for sale or for transfer to other works of same company: | | | | Tons..... | 24,012 | (?) | (?) |
| Tons..... | 1,238,554 | 877,177 | (?) | Value..... | \$2,296,707 | \$292,923 | (?) |
| Value..... | \$18,163,624 | \$11,079,831 | (?) | Shovels, spades, scoops, etc..... | \$540,321 | \$410,500 | (?) |
| All products other than steel and iron..... | \$17,081,830 | \$15,019,068 | (?) | V. PRODUCTS SOLD FOR EXPORT. | | | |
| III. STEEL. | | | | (By establishments producing.) | | | |
| Total production: | | | | Total tons..... | 867,646 | (?) | (?) |
| Tons..... | 23,473,713 | 13,666,408 | 10,685,000 | Rails..... | 317,455 | (?) | (?) |
| Value (included above)..... | \$478,730,988 | \$260,884,712 | \$212,638,876 | Rail fastenings..... | 20,118 | (?) | (?) |
| Classified according to process: | | | | Pipes and tubes, wrought welded..... | 59,377 | (?) | (?) |
| Open-hearth— | | | | Sheet and tin-plate bars..... | 85,123 | (?) | (?) |
| Tons..... | 14,192,278 | 5,817,057 | 3,044,356 | Plates and sheets..... | 80,706 | (?) | (?) |
| Value..... | \$293,628,201 | \$120,322,707 | \$71,855,172 | Galvanized plates or sheets..... | 79,240 | (?) | (?) |
| Basic— | | | | Structural shapes..... | 69,704 | (?) | (?) |
| Tons..... | 13,210,419 | 5,062,152 | 2,153,835 | Bars and rods..... | 48,938 | (?) | (?) |
| Value..... | \$262,620,822 | \$94,300,927 | \$43,509,500 | Wire rods..... | 18,738 | (?) | (?) |
| Acid— | | | | Blooms, billets, and slabs..... | 18,021 | (?) | (?) |
| Tons..... | 981,889 | 755,805 | 890,521 | Skelp..... | 10,703 | (?) | (?) |
| Value..... | \$30,998,379 | \$25,931,780 | \$28,345,666 | Miscellaneous..... | 29,457 | (?) | (?) |
| Bessemer— | | | | VI. EQUIPMENT. | | | |
| Tons..... | 9,174,067 | 7,768,141 | 7,532,028 | Steel plants: Daily capacity of steel furnaces and converters, tons of steel, double turn..... | 108,716 | 76,482 | 53,745 |
| Value..... | \$177,084,776 | \$134,549,580 | \$132,113,984 | Open-hearth furnaces— | | | |
| Crucible and miscellaneous— | | | | Number..... | 687 | 481 | 307 |
| Tons..... | 107,373 | 80,310 | 108,616 | Daily capacity, tons of steel, double turn..... | 61,601 | 34,243 | 18,245 |
| Value..... | \$8,144,011 | \$6,012,425 | \$8,569,719 | Basic— | | | |
| Classified according to form: | | | | Number..... | 549 | 339 | 168 |
| Ingot— | | | | Daily capacity, tons of steel, double turn..... | 55,273 | 26,902 | 12,151 |
| Tons..... | 22,908,862 | 13,379,083 | 10,507,844 | Acid— | | | |
| Value..... | \$439,874,540 | \$240,284,576 | \$197,028,982 | Number..... | 138 | 142 | 139 |
| Castings— | | | | Daily capacity, tons of steel, double turn..... | 6,328 | 7,341 | 6,064 |
| Tons..... | 504,850 | 287,325 | 177,156 | Converters, Bessemer or modified Bessemer— | | | |
| Value..... | \$38,862,448 | \$20,600,136 | \$14,609,893 | Number..... | 101 | 81 | 70 |
| Duplex process—open-hearth steel partly purified in Bessemer converters before finishing in open-hearth furnaces (included above), tons..... | 522,082 | (?) | (?) | Daily capacity, tons of steel, double turn..... | 48,823 | 41,448 | 34,925 |
| Alloyed steels, nickel, tungsten, titanium, chrome, vanadium, etc. (included above), tons..... | 158,210 | (?) | (?) | Crucible furnaces— | | | |
| Classified according to process: | | | | Number..... | 257 | 146 | 159 |
| Open-hearth..... | 100,335 | (?) | (?) | Number of pots that can be used at a heat..... | 3,840 | 2,457 | 2,523 |
| Basic..... | 80,242 | (?) | (?) | Daily capacity, tons of steel, double turn..... | 840 | 693 | 576 |
| Acid..... | 14,093 | (?) | (?) | All other steel furnaces— | | | |
| Bessemer..... | 45,324 | (?) | (?) | Number..... | 16 | 36 | (?) |
| Crucible and miscellaneous..... | 12,557 | (?) | (?) | Daily capacity, tons of steel, double turn..... | 292 | 98 | 56 |
| Classified according to form: | | | | Metal mixers— | | | |
| Ingot..... | 151,300 | (?) | (?) | Number..... | 59 | (?) | (?) |
| Castings..... | 6,916 | (?) | (?) | Capacity, tons..... | 14,343 | (?) | (?) |
| IV. MANUFACTURES FROM ROLLING-MILL PRODUCTS. | | | | Rolling mills: Daily capacity of rolled steel and iron, double turn, tons..... | 150,403 | 105,501 | 86,964 |
| (Made in mill producing, value previously included.) | | | | <p>¹ Includes materials purchased or transferred to the establishment reporting from other works of the company.</p> <p>² Not reported separately.</p> <p>³ In addition, steel castings and rolled steel valued at \$6,027,039 in 1909 and \$347,264 in 1904 were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.</p> <p>⁴ Includes 900 tons of iron rails, valued at \$20,700, in 1904, and 880 tons, valued at \$31,180, in 1899.</p> <p>⁵ Includes 140,688 tons of steel, valued at \$4,537,625, not distributable by kind into open-hearth or Bessemer.</p> <p>⁶ In addition, 49,481 tons of steel, valued at \$4,140,344, in 1909, and 4,184 tons, valued at \$347,264, in 1904, distributed as to tonnage as indicated below, were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation:</p> | | | |
| Wire and wire products: | | | | | | 1909 | 1904 |
| Tons (2,000 pounds)..... | 1,634,855 | 1,410,494 | 879,296 | Tons of steel..... | | 49,481 | 4,184 |
| Value..... | \$71,624,024 | \$67,551,443 | \$47,728,784 | Classified according to process: | | | |
| Pipes and tubes: | | | | Open-hearth..... | | 36,099 | 2,440 |
| Wrought welded— | | | | Bessemer..... | | 6,066 | 774 |
| Tons..... | 1,314,771 | 849,047 | (?) | Crucible and miscellaneous..... | | 7,316 | 970 |
| Value..... | \$68,471,573 | \$43,985,728 | (?) | Classified according to form: | | | |
| Seamless, hot-rolled or drawn— | | | | Ingot..... | | 5,102 | 4,184 |
| Tons..... | 54,273 | | (?) | Castings..... | | 44,379 | |
| Value..... | \$5,650,730 | | (?) | | | | |
| All other, including clinched, riveted, etc., but not including cast: | | 20,636 | (?) | | | | |
| Tons..... | 17,561 | \$2,290,234 | (?) | | | | |
| Value..... | \$989,699 | | (?) | | | | |
| Bolts, nuts, rivets, forged spikes, washers, etc.: | | | | | | | |
| Kegs (200 pounds)..... | 4,471,985 | 3,105,827 | (?) | | | | |
| Value..... | \$20,533,858 | \$13,854,635 | (?) | | | | |
| Cut nails and spikes: | | | | | | | |
| Kegs (100 pounds)..... | 1,009,319 | 1,311,549 | 1,658,443 | | | | |
| Value..... | \$2,218,207 | \$2,394,108 | \$3,292,063 | | | | |

7 Not reported.

The following table gives, for 1909, statistics of materials consumed, classified as purchased or as produced by the establishment consuming, and statistics of products, classified as sold or as consumed by the establishment producing. This information was not secured at former censuses. Eighty per cent of the pig iron used was made in blast furnaces operated by the consumer. The difference between the 15,252,736 tons of pig-iron material reported as produced by the consumer and the 15,858,203 tons reported in the table for blast furnaces as made for consumption in works of the producer—a little over 600,000 tons—represents the consumption in foundries and other shops owned by the producing companies but not covered by the preceding table.

| MATERIAL. | QUANTITY (TONS). | | | |
|---|------------------|------------------------------------|--|------------|
| | Total. | Produced by the company reporting— | | Purchased. |
| | | In the works where consumed. | Transferred from other works of the company. | |
| <i>Produced and purchased.</i> | | | | |
| Pig iron and ferroalloys..... | 19,076,889 | | 15,252,736 | 3,824,153 |
| Pig iron..... | 18,712,304 | | 15,108,244 | 3,604,060 |
| Ferroalloys—spiegeleisen, ferromanganese, etc..... | 364,585 | | 144,492 | 220,093 |
| Scrap..... | 9,929,710 | 5,126,093 | 773,843 | 4,029,774 |
| Ingots, blooms, billets, slabs, muck and scrap bar, rerolling rails, and sheet and tin-plate bars, not produced in the works..... | 6,508,249 | | 3,080,672 | 3,427,577 |
| Skelp..... | 1,578,290 | 1,401,573 | 35,221 | 141,496 |
| Wire rods..... | 1,465,221 | 1,318,796 | 128,291 | 18,134 |

| PRODUCT. | QUANTITY (TONS). | | | |
|---|------------------|-------------------------|---|-----------|
| | Total. | For consumption— | | For sale. |
| | | In the works producing. | Transferred to other works of the company | |
| <i>Consumed and sold.</i> | | | | |
| Steel ingots..... | 22,968,862 | 22,826,117 | 112,301 | 30,444 |
| Open-hearth..... | 13,725,783 | 13,626,241 | 72,433 | 27,109 |
| Basic..... | 12,952,840 | 12,864,514 | 69,815 | 18,511 |
| Acid..... | 772,943 | 761,727 | 2,618 | 8,598 |
| Bessemer..... | 9,145,542 | 9,103,816 | 39,726 | 2,000 |
| Crucible and miscellaneous..... | 97,537 | 96,060 | 142 | 1,333 |
| Blooms, billets, and slabs..... | 16,263,418 | 11,375,622 | 3,045,977 | 1,841,818 |
| Rolled forging blooms and billets..... | 160,997 | 76,614 | | 84,383 |
| Muck and scrap bar..... | 1,366,324 | 1,191,828 | 20,065 | 154,431 |
| Sheet and tin-plate bars..... | 2,094,398 | 441,637 | 27,353 | 1,625,408 |
| Bars and rods..... | 3,784,248 | 632,679 | | 3,151,569 |
| Wire rods..... | 2,295,279 | 1,318,796 | 465,161 | 511,322 |
| Plates and sheets..... | 3,332,733 | 463,665 | 61,954 | 2,807,113 |
| Black plates and sheets..... | 631,435 | | 575,160 | 56,275 |
| Skelp..... | 2,084,286 | 1,401,573 | 102,027 | 580,686 |
| Nail and tack plates..... | 68,557 | 42,690 | | 25,867 |
| Miscellaneous rolled iron or steel..... | 462,071 | 66,581 | 2,113 | 393,377 |
| Miscellaneous forged iron or steel..... | 365,986 | 64,543 | | 301,438 |
| Scrap..... | 6,364,647 | 5,126,093 | 398,436 | 840,118 |

Tin andterne plate.—The statistics for the tin andterne plate industry are given in the following table. Nearly 98 per cent of the black plates dipped were rolled by the establishment reporting. The value of all products was \$47,969,645 in 1909 as compared with \$31,892,011 in 1899, an increase of 50.4 per cent. The development of the tin andterne plate

industry has taken place almost entirely within the last 20 years, the production in 1891 being only about 2,236,000 pounds, or less than one five-hundredth of the 1909 output.

| Table 59 | 1909 | 1904 | 1899 |
|--|---------------------|---------------------|---------------------|
| MATERIALS. | | | |
| Total cost..... | \$41,888,434 | \$31,375,714 | \$36,728,150 |
| Black plates or sheets: | | | |
| Pounds..... | 1,321,071,691 | 1,019,608,657 | 827,915,599 |
| Cost..... | \$26,981,151 | \$22,992,006 | \$20,668,848 |
| Produced by the establishment reporting: | | | |
| Pounds..... | 1,291,048,109 | 943,798,583 | (⁴) |
| Cost..... | \$26,245,234 | \$21,154,988 | (⁴) |
| Purchased: | | | |
| Pounds..... | 30,023,582 | 75,810,074 | (⁴) |
| Cost..... | \$735,917 | \$1,837,518 | (⁴) |
| Coating metals: | | | |
| Pounds..... | 49,927,759 | 32,445,194 | 27,154,258 |
| Cost..... | \$9,679,067 | \$7,073,722 | \$4,927,090 |
| Tin, including tin contents ofterne mixture purchased— | | | |
| Pounds..... | 31,077,651 | 24,243,551 | 20,282,778 |
| Cost..... | \$9,235,715 | \$6,709,164 | \$4,528,473 |
| Lead, including lead contents ofterne mixture purchased— | | | |
| Pounds..... | 9,850,108 | 8,201,253 | 6,871,450 |
| Cost..... | \$434,519 | \$366,558 | \$398,617 |
| In condition purchased— | | | |
| Pig tin— | | | |
| Pounds..... | 28,586,267 | (⁵) | (⁵) |
| Cost..... | \$3,490,794 | | |
| Pig lead— | | | |
| Pounds..... | 2,708,496 | (⁵) | (⁵) |
| Cost..... | \$117,656 | | |
| Terne mixture— | | | |
| Pounds..... | 9,632,996 | (⁵) | (⁵) |
| Cost..... | \$1,061,587 | | |
| All other materials..... | \$3,238,246 | \$1,307,990 | \$1,132,212 |
| PRODUCTS. | | | |
| Total value..... | \$47,969,645 | \$35,283,360 | \$31,892,011 |
| Tin andterne plates: | | | |
| Pounds..... | 1,315,313,132 | 1,028,384,551 | 849,064,022 |
| Value..... | \$45,815,146 | \$34,549,543 | \$31,284,145 |
| Tin plates— | | | |
| Pounds..... | 1,123,968,875 | 867,526,985 | 707,718,229 |
| Value..... | \$38,269,855 | \$28,429,971 | \$25,563,021 |
| Terne plates— | | | |
| Pounds..... | 191,344,257 | 158,857,866 | 141,285,783 |
| Value..... | \$7,555,261 | \$6,119,572 | \$5,721,124 |
| Other sheet iron or sheet steel tinned orterne-plated, taggers tin, etc.:— | | | |
| Pounds..... | 19,400,934 | 6,555,855 | 1,000,473 |
| Value..... | \$220,465 | \$217,476 | \$86,492 |
| All other products..... | \$1,634,034 | \$516,341 | \$521,374 |
| EQUIPMENT. | | | |
| <i>Tin orterne sets at end of year:</i> | | | |
| Completed— | | | |
| Number..... | 563 | 596 | 585 |
| Usually employed on tin plates..... | 450 | 478 | (⁴) |
| Usually employed onterne plates..... | 113 | 120 | (⁴) |
| Daily capacity, single turn, pounds..... | 2,795,972 | 3,261,298 | 2,732,961 |
| Tin plates..... | 2,065,915 | 2,694,115 | 2,068,525 |
| Terne plates..... | 740,667 | 567,183 | 729,363 |
| Daily capacity as operated, whether on single, double, or triple turn, pounds..... | 7,016,293 | 7,121,239 | (⁴) |
| Building, number..... | 49 | (⁴) | 53 |
| <i>Black-plate department of establishments making their black plates:</i> | | | |
| Hot black-plate mills at end of year..... | | | |
| Completed— | | | |
| Number..... | 335 | 315 | 332 |
| Annual capacity on triple turn, long tons..... | 1,042,068 | 707,435 | 641,450 |
| Building..... | | | |
| Number..... | 20 | (⁴) | 23 |
| Annual capacity on triple turn, long tons..... | 36,660 | (⁴) | 51,275 |
| Cold mills, completed, number..... | 268 | 272 | 306 |

¹ Domestic; no foreign plates reported; includes 8,726,538 pounds of iron plates; balance steel, not distributable by kind of steel.

² Includes \$3,900 pounds of foreign plates, costing \$3,760; the domestic plates reported were distributed by kind as follows: Bessemer steel, 911,663,929 pounds; open-hearth steel, 106,911,401 pounds; iron, 949,267 pounds.

³ Includes 2,358,667 pounds of foreign plates, costing \$78,282.

⁴ Not reported.

⁵ Consumption of establishments not equipped for the manufacture of black plates.

⁶ Terne mixture purchased not reported separately; contents reported as tin and lead.

⁷ In addition 8,339,200 pounds of tin andterne plate and taggers tin, valued at \$398,143, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

⁸ Includes idle establishments.

Wire.—The following table presents the statistics for wire manufactures in 1909. Comparable statistics in detail for 1904 and 1899 are not available for the total wire production, as special reports were not secured prior to the present census from wire mills drawing wire from purchased rods. The total value of the steel and iron wire product more than doubled from 1899 to 1909. The total value of all wire and manufactures of wire reported in 1909 was \$173,349,614, of

which 69.6 per cent represents the value of products made from steel and iron, 27.2 per cent that of products made from copper, and 3.2 per cent that of products made from other metal, chiefly brass. Establishments rolling wire from rods manufactured by them reported 54.3 per cent of the wire products in value, and mills drawing wire from purchased rods produced 45.7 per cent. The *ton of 2,000 pounds* is used in showing quantities.

Table 60

| | Total. | Wire mills (wire rods purchased). | Wire depart- ments of rolling mills ¹ (wire rods rolled). | | Total. | Wire mills (wire rods purchased). | Wire depart- ments of rolling mills ¹ (wire rods rolled). |
|----------------------------------|---------------|---|--|---|--------------|---|--|
| PRINCIPAL MATERIALS. | | | | PRODUCTS—continued. | | | |
| Metal used, cost..... | \$115,655,427 | \$51,240,373 | \$64,415,054 | Wire and manufactures of wire—Contd. | | | |
| Wire rods..... | \$112,799,510 | \$50,810,983 | \$61,988,533 | Steel and iron—Continued. | | | |
| Steel— | | | | Barb wire— | | | |
| Tons..... | 2,514,504 | 850,729 | 1,663,775 | Tons..... | 323,565 | 76,268 | 247,297 |
| Cost..... | \$67,439,887 | \$23,021,867 | \$44,418,020 | Value..... | \$13,881,517 | \$3,343,856 | \$10,537,661 |
| Open-hearth— | | | | Woven wire, fencing, and poultry netting— | | | |
| Tons..... | 1,359,256 | 285,961 | 1,073,295 | Tons..... | 422,127 | 115,889 | 306,238 |
| Cost..... | \$38,532,177 | \$8,536,361 | \$29,995,816 | Value..... | \$21,419,170 | \$6,724,077 | \$14,695,093 |
| Basic— | | | | Wire rope and strand— | | | |
| Tons..... | 1,255,747 | 233,105 | 1,022,642 | Tons..... | 45,303 | 34,140 | 11,163 |
| Cost..... | \$35,046,106 | \$6,695,310 | \$28,350,796 | Value..... | \$6,683,771 | \$5,450,064 | \$1,233,707 |
| Acid— | | | | Other manufactures—springs, bale ties, cold-rolled flat wire, etc.— | | | |
| Tons..... | 103,509 | 52,856 | 50,653 | Tons..... | 129,945 | 71,906 | 58,039 |
| Cost..... | \$3,488,071 | \$1,841,051 | \$1,645,020 | Value..... | \$10,856,154 | \$6,130,901 | \$4,725,253 |
| Bessemer— | | | | Copper— | | | |
| Tons..... | 1,148,353 | 558,048 | 590,305 | Tons..... | 154,231 | 102,604 | 51,627 |
| Cost..... | \$28,340,445 | \$13,936,178 | \$14,404,267 | Value..... | \$47,184,164 | \$30,831,646 | \$16,352,518 |
| Crucible and other steel— | | | | Wire drawn for sale— | | | |
| Tons..... | 6,895 | 6,720 | 175 | Tons..... | 139,482 | 102,418 | 37,064 |
| Cost..... | \$567,265 | \$549,328 | \$17,937 | Value..... | \$42,336,274 | \$30,736,728 | \$11,599,546 |
| Iron— | | | | Manufactures of wire— | | | |
| Tons..... | 4,849 | 1,055 | 3,794 | Tons..... | 14,749 | 186 | 14,563 |
| Cost..... | \$207,846 | \$62,203 | \$145,643 | Value..... | \$4,847,890 | \$94,918 | \$4,752,972 |
| Copper— | | | | Other metal— ² | | | |
| Tons..... | 151,951 | 102,394 | 49,557 | Tons..... | 17,407 | 1,048 | 16,359 |
| Cost..... | \$40,916,084 | \$27,462,312 | \$13,463,772 | Value..... | \$5,579,813 | \$484,019 | \$5,095,794 |
| Other metal— ³ | | | | Wire drawn for sale— | | | |
| Tons..... | 17,944 | 935 | 17,009 | Tons..... | 15,583 | 1,008 | 14,575 |
| Cost..... | \$4,235,690 | \$264,001 | \$3,971,688 | Value..... | \$4,003,370 | \$459,583 | \$4,533,793 |
| Purchased wire, plain or coated: | | | | Manufactures of wire— | | | |
| Tons..... | 57,922 | 8,943 | 48,979 | Tons..... | 1,824 | 40 | 1,784 |
| Cost..... | \$2,855,911 | \$420,390 | \$2,426,521 | Value..... | \$586,437 | \$24,436 | \$562,001 |
| PRODUCTS. | | | | All other products..... | \$6,733,908 | \$5,236,649 | \$1,497,259 |
| Total value..... | \$180,083,522 | \$84,486,518 | \$95,597,004 | Wire drawn, whether for consumption or for sale, tons: | | | |
| Wire, and manufactures of wire— | | | | Steel and iron..... | 2,389,136 | 787,322 | 1,601,814 |
| Steel and iron— | | | | Copper..... | 147,160 | 101,890 | 45,266 |
| Tons..... | 2,471,868 | 821,929 | 1,649,920 | Other metal ³ | 17,411 | 1,051 | 16,360 |
| Value..... | \$120,585,037 | \$47,934,204 | \$72,651,433 | EQUIPMENT. | | | |
| Wire drawn for sale— | | | | Wire-drawing blocks: | | | |
| Tons..... | 826,451 | 343,905 | 482,546 | Number..... | 43,697 | 28,119 | 15,578 |
| Value..... | \$38,845,081 | \$18,823,035 | \$20,022,040 | Annual capacity, tons..... | 3,213,574 | 1,065,250 | 2,148,324 |
| Plain— | | | | Wire-nail machines: | | | |
| Tons..... | 472,046 | 188,846 | 283,200 | Number..... | 4,428 | 1,207 | 3,221 |
| Value..... | \$22,632,230 | \$11,349,808 | \$11,282,302 | Annual capacity (kegs of 100 pounds)..... | 18,756,995 | 4,693,513 | 14,063,482 |
| Coated— | | | | Woven-wire fence machines: | | | |
| Tons..... | 354,405 | 155,059 | 199,346 | Number..... | 440 | 198 | 248 |
| Value..... | \$16,212,851 | \$7,473,107 | \$8,739,684 | Annual capacity, tons..... | 481,373 | 134,803 | 346,570 |
| Wire nails and spikes— | | | | | | | |
| Kegs (100 pounds)..... | 13,926,861 | 3,449,753 | 10,477,108 | | | | |
| Value..... | \$27,575,774 | \$7,142,047 | \$20,433,727 | | | | |
| Wire brads, tacks, and staples— | | | | | | | |
| Tons..... | 28,125 | 7,334 | 20,791 | | | | |
| Value..... | \$1,324,170 | \$320,224 | \$1,003,946 | | | | |

¹ Includes the wire departments of iron and steel, copper, and brass rolling mills.

² Brass, bronze, German silver, zinc, etc., chiefly brass.

³ Includes rod, redrawing, and fine wire blocks.

The comparative statistics for steel and iron wire products, 1909, 1904, and 1899, are as follows:

| Table 61 | PRODUCT. | 1909 | 1904 | 1899 |
|----------|------------------------------------|---------------|--------------|--------------|
| | Total value..... | \$120,585,637 | \$83,853,956 | \$52,871,387 |
| | Wire mills..... | \$47,934,204 | \$15,802,513 | \$5,142,603 |
| | Wire departments of rolling mills: | | | |
| | Tons..... | 1,649,920 | 1,416,494 | 879,296 |
| | Value..... | \$72,651,433 | \$67,551,443 | \$47,728,784 |

LEATHER AND ITS PRODUCTS.

The primary or underlying industry of this group is the converting of hides and skins into leather by the various processes of tanning, tawing, currying, and finishing. The designation employed for this industry is "leather, tanned, curried, and finished." The group also includes the manufacture of boots and shoes and the manufacture of leather gloves and mittens.

Leather.—The following table gives the statistics of the leather industry in detail for 1909, 1904, and 1899.

The number of hides and skins treated, including those treated as custom work for others not tanners, curriers, or finishers, as well as those used in further manufacture by the establishments treating them, was 146,328,586 in 1909 and 131,011,956 in 1904. Comparative figures for this aggregate for 1899 are not available. Exclusive of custom work, 116,040,986 hides and skins, costing \$195,058,557, were treated by tanneries in 1909, and 99,709,343, costing \$123,545,969, in 1899, the increase in number being 16.4 per cent and that in cost 57.9 per cent. The increase for the decade in the number of hides used was 15.9 per cent;

that in calf and kip skins, 120.6 per cent; that in sheepskins, 6.4 per cent; and that in goatskins, less than 1 per cent.

The cost of purchased rough leather used increased 43.4 per cent and that of all other materials, which include tanning and finishing materials, 76.1 per cent.

The value of leather manufactured in 1909 was \$306,476,720, as compared with \$194,202,063 in 1899, an increase of 57.8 per cent, which is practically the same as the percentage of increase in the cost of hides and skins treated. There is considerable duplication in the value of products, due to the sale of leather in the rough as product of one establishment and its use as material in another.

| Table 62 | 1909 | 1904 | 1899 | | 1909 | 1904 | 1899 |
|---------------------------------|----------------------|----------------------|----------------------|-----------------------------------|--------------|--------------|--------------|
| MATERIALS. | | | | PRODUCTS—continued. | | | |
| Total cost..... | \$248,278,933 | \$191,179,073 | \$155,000,004 | Leather—Continued. | | | |
| Hides ¹ (all kinds): | | | | Upper—Continued. | | | |
| Number..... | 18,800,415 | 17,581,612 | 15,838,862 | Finished splits— | | | |
| Cost..... | \$119,410,767 | \$89,126,593 | \$77,784,760 | Number..... | 8,134,229 | 6,205,050 | 8,790,382 |
| Skins: ² | | | | Value..... | \$7,410,740 | \$5,993,231 | \$6,740,502 |
| Number..... | 97,680,571 | 90,625,064 | 83,870,481 | Patent and enameled shoe— | | | |
| Cost..... | \$75,647,790 | \$50,341,332 | \$45,701,209 | Sides..... | 2,705,291 | 1,556,777 | 236,943 |
| Calf and kip— | | | | Value..... | \$8,341,727 | \$3,335,352 | \$1,092,534 |
| Number..... | 19,732,638 | 12,481,221 | 8,944,454 | Horsehides and coltskins— | | | |
| Cost..... | \$31,790,572 | \$15,725,616 | \$10,792,485 | Number..... | 1,342,938 | 1,529,395 | 223,378 |
| Goat— | | | | Value..... | \$4,953,145 | \$4,596,065 | \$643,118 |
| Number..... | 48,077,064 | 47,605,603 | 48,046,897 | Calf and kip skins, tanned and | | | |
| Cost..... | \$27,833,214 | \$26,756,012 | \$24,950,223 | finished— | | | |
| Sheep— | | | | Number..... | 19,012,064 | 12,614,223 | 8,264,272 |
| Number..... | 26,082,060 | 27,492,359 | 24,507,642 | Value..... | \$42,412,266 | \$22,508,335 | \$14,619,150 |
| Cost..... | \$12,231,618 | \$10,547,883 | \$8,457,995 | Grain finished— | | | |
| All other— | | | | Number..... | 17,516,910 | 10,211,885 | 7,112,859 |
| Number..... | 3,788,209 | 2,085,881 | 2,371,488 | Value..... | \$39,982,447 | \$18,996,551 | \$12,127,429 |
| Cost..... | \$3,792,386 | \$3,811,821 | \$1,560,506 | Flesh finished— | | | |
| Rough leather purchased | | | | Number..... | 1,495,154 | 1,802,308 | 1,151,413 |
| Whole sides— | | | | Value..... | \$2,429,869 | \$3,511,784 | \$2,491,711 |
| Number..... | 1,468,213 | 2,414,102 | 1,086,592 | Goatskins, tanned and finished— | | | |
| Cost..... | \$4,967,781 | \$8,136,661 | \$3,534,097 | Number..... | 47,907,211 | 45,691,492 | 47,043,622 |
| Grains— | | | | Value..... | \$40,582,640 | \$37,987,349 | \$35,672,381 |
| Sides..... | 525,786 | 342,332 | 165,938 | Black— | | | |
| Cost..... | \$1,201,842 | \$980,260 | \$467,125 | Number..... | 40,351,192 | 40,019,614 | 38,178,816 |
| Splits..... | \$1,442,505 | \$1,108,243 | \$1,320,569 | Value..... | \$33,949,375 | \$32,822,282 | \$29,650,886 |
| All other..... | \$1,944,129 | \$627,491 | \$1,341,584 | Colored— | | | |
| All other materials..... | \$43,664,119 | \$34,858,493 | \$24,790,640 | Number..... | 7,556,019 | 5,671,878 | 5,967,116 |
| | | | | Value..... | \$6,903,065 | \$5,065,067 | \$6,622,065 |
| PRODUCTS. | | | | Sheepskins, tanned and finished— | | | |
| Total value..... | \$327,874,187 | \$252,620,986 | \$204,038,127 | Number..... | 19,665,155 | 20,597,596 | 20,290,985 |
| Leather..... | \$306,476,720 | \$236,765,803 | \$194,202,063 | Value..... | \$12,236,687 | \$11,168,820 | \$8,353,755 |
| Sole..... | \$88,331,713 | \$60,205,600 | \$55,481,625 | Belting— | | | |
| Hemlock— | | | | Sides..... | 1,642,070 | 859,544 | 1,472,616 |
| Sides..... | 7,963,728 | 9,929,964 | 9,810,996 | Value..... | \$6,993,133 | \$4,754,456 | \$7,062,778 |
| Value..... | \$32,237,151 | \$32,676,015 | \$29,305,561 | Harness— | | | |
| Oak— | | | | Sides..... | 3,046,235 | 4,369,561 | 3,444,616 |
| Sides..... | 3,805,861 | 3,607,963 | 2,562,814 | Value..... | \$24,802,734 | \$20,274,188 | \$18,712,656 |
| Value..... | \$26,083,793 | \$19,157,805 | \$13,359,836 | Carriage, automobile, and furni- | | | |
| Union— | | | | ture— | | | |
| Sides..... | 5,756,227 | 4,400,011 | 3,096,162 | Hides..... | 1,368,542 | 827,104 | 619,741 |
| Value..... | \$28,375,815 | \$17,371,780 | \$12,807,262 | Value..... | \$14,266,742 | \$7,780,804 | \$5,748,387 |
| Chrome— | | | | Trunk, bag, and pocketbook..... | \$6,198,544 | \$4,920,750 | \$2,611,326 |
| Sides..... | 279,436 | (³) | 2,100 | Bookbinder's..... | \$2,450,155 | \$2,283,761 | \$1,688,413 |
| Value..... | \$1,634,954 | (³) | \$8,966 | Glove..... | \$4,913,543 | \$3,344,614 | \$3,064,837 |
| Upper, other than calf or kip | | | | Sold in rough..... | \$6,335,669 | \$10,180,949 | \$6,864,345 |
| skins..... | \$39,951,460 | \$24,815,835 | \$25,311,838 | All other..... | \$11,746,360 | \$13,044,268 | \$10,117,454 |
| Grain, satin, pebble, etc. | | | | All other products..... | \$8,632,689 | \$7,665,223 | \$5,514,395 |
| (side leather)— | | | | Work on materials for others..... | \$12,764,778 | \$8,189,960 | \$4,321,669 |
| Sides..... | 7,946,769 | 6,850,469 | 8,141,093 | | | | |
| Values..... | \$24,198,993 | \$15,487,262 | \$17,478,802 | | | | |

¹ In addition, in 1909, 1,903,278 hides and 27,936,887 skins and in 1904, 961,431 hides and 21,792,110 skins, were treated for others, not tanners, curriers, or finishers; and in 1909, 252,639 hides and 194,796 skins and in 1904, 12,453 hides and 39,285 skins were treated by establishments using the leather for further manufacture.

² Cattle hides only.

³ Includes horsehides.

⁴ In addition, in 1909, leather to the value of \$6,231,374, and in 1904 to the value of \$154,922, was tanned, curried, or finished and consumed by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

⁵ Not reported separately.

Boots and shoes.—The full designation for this industry is "boots and shoes, including cut stock and findings." The total value of products was \$512,797,642 in 1909, as compared with \$357,688,160

in 1904 and \$290,047,087 in 1899, an increase for the decade of \$222,750,555, or 76.8 per cent. In addition, in 1909 there were boot and shoe products to the value of \$1,439,280, and in 1904 to the value of \$89,000,

made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation. The schedule employed did not call for segregation of value of products. The following table shows the number of pairs of the different kinds of shoes and slippers reported at each of the last three censuses.

| Table 63 KIND. | NUMBER OF PAIRS. | | |
|---------------------------------------|------------------|------------------|------------------|
| | 1909 | 1904 | 1899 |
| Boots and shoes..... | 247,643,197 | 216,039,401 | 195,589,173 |
| Men's..... | 93,888,892 | 83,434,322 | 67,742,830 |
| Boys' and youths'..... | 23,838,026 | 21,717,236 | 21,030,479 |
| Women's..... | 86,595,314 | 69,470,876 | 64,972,653 |
| Misses' and children's..... | 43,320,365 | 41,416,967 | 41,843,202 |
| Slippers..... | 17,507,834 | 17,518,291 | 17,092,841 |
| Men's, boys', and youths'..... | 4,802,841 | 4,403,097 | 4,448,965 |
| Women's, misses', and children's..... | 12,704,993 | 13,115,194 | 12,645,876 |
| Infants' shoes and slippers..... | 15,000,721 | (¹) | (¹) |
| All other..... | 4,865,420 | 8,552,343 | 5,283,405 |

¹ Not reported separately.

There were 247,643,197 pairs of boots and shoes manufactured in 1909, 216,039,401 pairs in 1904, and

195,589,173 pairs in 1899, the increase being 26.6 per cent for the decade and 14.6 per cent for the 1904-1909 period. In 1909 men's boots and shoes formed 37.9 per cent of the total number of boots and shoes; women's, 35 per cent; misses' and children's, 17.5 per cent; and boys' and youths', 9.6 per cent.

The total output of slippers reported for 1909 was 17,507,834 pairs, practically the same as at each of the two preceding censuses. The figures indicate a considerable decrease since 1904 in women's, misses', and children's slippers, but it is probable that infants' shoes and slippers, reported separately in 1909, were to some extent included with children's slippers in 1904.

The number of pairs of the different kinds of boots, shoes, and slippers manufactured by the various methods was reported for the first time in 1909, and is shown in the next table. Of the total number manufactured, 43.2 per cent were of the McKay type, 35.3 per cent machine or hand welt, 10.6 per cent turned, 8.8 per cent wire-screw or metal-fastened, and 2.1 per cent wooden-pegged.

| Table 64 KIND. | NUMBER OF PAIRS. | | | | | |
|---------------------------------------|------------------|-----------------------|------------|-------------|----------------|-------------------------------|
| | Total. | Machine or hand welt. | Turned. | McKay. | Wooden-pegged. | Wire-screw or metal-fastened. |
| Boots and shoes..... | 247,643,197 | 87,391,763 | 26,317,990 | 107,063,644 | 5,226,161 | 21,643,639 |
| Men's..... | 93,888,892 | 53,212,450 | 989,240 | 20,438,585 | 3,921,662 | 15,326,965 |
| Boys' and youths'..... | 23,838,026 | 4,423,934 | 50,377 | 15,016,611 | 567,939 | 3,779,765 |
| Women's..... | 86,595,314 | 25,871,899 | 14,281,704 | 44,618,966 | 533,579 | 1,389,106 |
| Misses' and children's..... | 43,320,365 | 3,883,480 | 10,906,609 | 27,080,482 | 202,991 | 1,147,803 |
| Slippers..... | 17,507,834 | 1,318,995 | 7,011,748 | 8,306,874 | 28,018 | 161,299 |
| Men's, boys', and youths'..... | 4,802,841 | 648,007 | 1,733,742 | 2,286,652 | 16,851 | 117,589 |
| Women's, misses', and children's..... | 12,704,993 | 670,988 | 5,878,006 | 6,110,222 | 12,067 | 33,710 |
| Infants' shoes and slippers..... | 15,000,721 | 1,979,593 | 11,447,508 | 1,250,072 | 41,731 | 11,817 |
| All other..... | 4,865,420 | 1,420,249 | 1,180,742 | 1,280,281 | 321,082 | 639,075 |

Gloves and mittens, leather.—The quantity and value of the different kinds of products reported for this branch of the leather industry for 1909, 1904, and 1899 are shown in the following table:

| Table 65 PRODUCT. | 1909 | 1904 | 1899 |
|---------------------------------|--------------|--------------|----------------|
| Total value..... | \$23,630,598 | \$17,740,385 | \$16,926,156 |
| Gloves, mittens, and gauntlets: | | | |
| Dozen pairs..... | 3,368,655 | 3,370,146 | * 2,895,661 |
| Value..... | \$22,526,801 | \$17,122,772 | * \$16,039,108 |
| Men's— | | | |
| Dozen pairs..... | 2,585,977 | 2,915,415 | 2,267,327 |
| Value..... | \$17,060,797 | \$14,515,770 | \$12,418,258 |
| Lined— | | | |
| Dozen pairs..... | 921,259 | 1,317,083 | 952,820 |
| Value..... | \$5,222,174 | \$6,333,081 | \$4,959,902 |
| Unlined— | | | |
| Dozen pairs..... | 1,664,718 | 1,598,332 | 1,314,507 |
| Value..... | \$11,838,023 | \$8,182,689 | \$7,458,356 |
| Women's and children's: | | | |
| Dozen pairs..... | 782,678 | 454,731 | 604,330 |
| Value..... | \$5,405,004 | \$2,607,002 | \$3,470,258 |
| Lined— | | | |
| Dozen pairs..... | 365,477 | 241,361 | 267,149 |
| Value..... | \$1,718,198 | \$1,030,843 | \$1,247,916 |
| Unlined— | | | |
| Dozen pairs..... | 417,201 | 213,370 | 337,181 |
| Value..... | \$3,746,806 | \$1,576,159 | \$2,222,342 |
| All other products..... | \$1,104,737 | \$617,613 | \$886,988 |

¹ In addition, in 1909, 36,944 dozen pairs of gloves, mittens, and gauntlets, to the value of \$204,961; in 1904, gloves, mittens, and gauntlets, to the value of \$160,164; and in 1899, gloves, mittens, and gauntlets, to the value of \$217,157, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² Includes 24,004 dozen pairs of gauntlets, valued at \$150,652, not distributed by kinds.

The greater increase in value was due to the higher prices paid for hides and skins, and an increased production of the better grades of gloves.

The number of men's gloves manufactured largely outnumbered that of women's and children's at each census, but importations of kid gloves for women probably greatly reduce the demand for American makes. The number of men's gloves increased during the decade 14.1 per cent, and the number of women's and children's 29.5 per cent.

CHEMICALS AND ALLIED PRODUCTS.

The industries in this group comprise those which produce chemicals as products or which employ to a large extent chemical processes in manufacture. The grouping is necessarily somewhat arbitrary. Separate tables present the statistics for each of the following industries:

| | |
|--------------------------------|-------------------------------------|
| Chemicals. | Oil, essential. |
| Coke. | Paint and varnish. |
| Dyestuffs and extracts. | Petroleum, refining. |
| Explosives. | Salt. |
| Fertilizers. | Soap. |
| Gas, illuminating and heating. | Sulphuric, nitric, and mixed acids. |
| Glucose and starch. | Turpentine and rosin. |
| Oil, cottonseed, and cake. | |

Chemicals.—Table 66 presents the statistics for the general chemical industry as classified by the Bureau of the Census, but reference should be made to the groups and items specified in the table for information as to the products included under this head. It does not include products listed independently in the preceding paragraph, nor does it include the products of wood distillation or chemicals made by establishments engaged in the manufacture of pharmaceutical preparations.

The value of all products of the "chemical" industry, including the same commodities made by establishments engaged primarily in the manufacture of other products, was \$126,794,345 in 1909 and \$78,285,646 in 1904. The products of establishments classified as chemical factories proper were valued at \$117,688,887 in 1909 and \$48,039,595 in 1899, an increase for the decade of \$69,649,292, or 145 per cent. Some of the groups show very large gains, notably products made with the aid of electricity, many of which can not be shown separately without disclosing individual operations. The value of these products increased from \$1,305,368 in 1899 to \$17,968,277 in 1909 and the value of the output of sodas, the leading group of products in this respect, increased from \$11,596,915 to \$21,417,982.

The value of the sulphuric, nitric, and mixed acid product, shown in Table 80, should be added to the value of the acids given in the following table in order to ascertain the total production of the principal acids. Including these acids, the value of the acid product (not including acids consumed by establishments making the same or those produced as by-products of other industries) was \$19,493,663 in 1909, \$14,538,137 in 1904, and \$9,371,615 in 1899, the increase for the decade being 108 per cent. The *ton of 2,000 pounds* is used in showing quantities.

| Table 66 | PRODUCT. | 1909 | 1904 | 1899 |
|--------------|--------------------------|----------------------|---------------------|---------------------|
| | Total value..... | \$117,688,887 | \$75,222,249 | \$48,039,595 |
| Acids | | | | |
| | Acetic..... | \$11,926,389 | \$7,583,059 | \$3,161,743 |
| | Pounds..... | 51,963,788 | 27,001,322 | 24,945,558 |
| | Value..... | \$1,136,134 | \$637,542 | \$396,323 |
| | Boric..... | 5,554,414 | 6,956,896 | 2,684,935 |
| | Pounds..... | \$295,739 | \$527,190 | \$198,212 |
| | Citric..... | 2,102,206 | 2,285,631 | (¹) |
| | Pounds..... | \$777,200 | \$598,718 | (¹) |
| | Hydrofluoric..... | 4,790,963 | 2,932,358 | 698,000 |
| | Pounds..... | \$214,657 | \$151,218 | \$34,890 |
| | Muriatic..... | 128,894,736 | 127,502,682 | 116,675,109 |
| | Pounds..... | \$1,171,082 | \$1,180,910 | \$1,015,915 |
| | Oleic..... | 13,337,717 | (¹) | (¹) |
| | Pounds..... | \$680,015 | (¹) | (¹) |
| | Phosphoric..... | 25,702,606 | 991,050 | (¹) |
| | Pounds..... | \$505,791 | \$68,541 | (¹) |
| | Value..... | \$7,145,771 | \$4,518,940 | \$1,516,403 |
| | Other..... | \$21,417,982 | \$16,858,929 | \$11,596,915 |
| Sodas | | | | |
| | Soda ash..... | 646,007 | 518,789 | 386,361 |
| | Tons..... | \$10,361,756 | \$8,202,292 | \$4,768,383 |
| | Sal soda..... | 76,285 | 56,870 | 63,231 |
| | Tons..... | \$977,712 | \$792,248 | \$779,166 |
| | Bicarbonate of soda..... | 82,800 | 68,867 | 68,185 |
| | Tons..... | \$1,515,031 | \$1,135,610 | \$1,324,843 |
| | Caustic soda..... | 112,152 | 80,159 | 78,779 |
| | Tons..... | \$4,230,954 | \$2,624,182 | \$2,917,955 |

| Table 66— Contd. | PRODUCT. | 1909 | 1904 | 1899 |
|-------------------------|---|--------------|------------------|------------------|
| Sodas—Continued. | | | | |
| | Borax..... | 20,154 | 20,882 | 5,637 |
| | Tons..... | \$1,766,910 | \$2,122,808 | \$502,480 |
| | Value..... | \$2,565,619 | \$1,681,789 | \$1,304,088 |
| | Potashes..... | 1,866,579 | 5,113,706 | 3,764,806 |
| | Pounds..... | \$88,940 | \$563,489 | \$174,476 |
| | Alums..... | \$2,578,842 | \$2,126,612 | \$2,013,607 |
| | Alum cake..... | 26,884,880 | (¹) | (¹) |
| | Pounds..... | \$273,711 | (¹) | (¹) |
| | Potash alum..... | 7,939,702 | (¹) | (¹) |
| | Pounds..... | \$128,623 | (¹) | (¹) |
| | All other..... | \$2,176,508 | (¹) | (¹) |
| | Coal-tar products..... | \$2,675,327 | \$844,817 | \$1,322,094 |
| | Coal-tar distillery products..... | \$2,402,330 | \$349,641 | \$809,830 |
| | Chemicals made from coal-tar distillery products..... | \$212,997 | \$504,176 | \$512,264 |
| | Cyanides..... | \$1,941,893 | \$1,179,104 | \$1,584,923 |
| | Yellow prussiate of potash..... | 3,510,208 | 5,027,264 | 6,190,496 |
| | Pounds..... | \$463,583 | \$983,277 | \$993,514 |
| | Value..... | \$1,477,919 | \$495,827 | \$591,409 |
| | All other..... | \$1,635,046 | \$777,750 | \$492,096 |
| | Bleaching materials..... | 9,403,717 | (¹) | (¹) |
| | Hydrogen peroxide..... | \$850,417 | (¹) | (¹) |
| | Bisulphites..... | 14,528 | (¹) | (¹) |
| | Tons..... | \$302,504 | (¹) | (¹) |
| | Value..... | \$582,125 | \$777,750 | \$492,096 |
| | All other..... | \$17,968,277 | \$5,896,632 | \$1,305,368 |
| | Chemical substances produced by the aid of electricity..... | 121,946,967 | (¹) | (¹) |
| | Calcium carbide..... | \$2,964,061 | (¹) | (¹) |
| | Pounds..... | 19,428 | (¹) | (¹) |
| | Value..... | \$1,022,647 | (¹) | (¹) |
| | Chlorates..... | 11,568,915 | (¹) | (¹) |
| | Pounds..... | \$904,525 | (¹) | (¹) |
| | Hypochlorites..... | 68,016 | (¹) | (¹) |
| | Tons..... | \$1,566,321 | (¹) | (¹) |
| | Value..... | \$11,540,273 | \$5,896,632 | (¹) |
| | All other..... | \$7,180,172 | \$4,755,761 | \$2,092,409 |
| | Plastics..... | \$5,389,819 | \$2,857,093 | \$1,970,287 |
| | Pyroxylin plastics..... | 10,234,928 | (¹) | (¹) |
| | Pounds..... | \$1,790,353 | \$1,898,068 | \$129,013 |
| | Value..... | \$4,969,805 | \$2,787,089 | \$1,215,911 |
| | Compressed or liquefied gases..... | 11,802,076 | (¹) | (¹) |
| | Anhydrous ammonia..... | \$2,503,315 | \$1,172,154 | \$448,157 |
| | Pounds..... | 47,238,267 | 35,991,627 | (¹) |
| | Value..... | \$2,317,806 | \$1,343,966 | \$696,164 |
| | Laughing gas..... | 72,675 | (¹) | (¹) |
| | Pounds..... | \$33,689 | (¹) | (¹) |
| | Oxygen..... | 4,777,977 | (¹) | (¹) |
| | Gallons..... | \$98,150 | (¹) | (¹) |
| | Value..... | 364,014 | \$270,539 | \$70,090 |
| | All other..... | \$16,843 | (¹) | (¹) |
| | Fine chemicals..... | \$10,956,066 | \$9,145,853 | \$4,220,339 |
| | Alkaloids..... | 3,482,482 | 4,949,525 | 2,387,522 |
| | Ounces..... | \$3,188,691 | \$2,925,789 | \$1,743,264 |
| | Gold salts..... | 42,544 | 59,969 | 8,594 |
| | Ounces..... | \$490,944 | \$449,894 | \$90,145 |
| | Silver salts..... | 2,027,719 | 1,742,882 | 1,252,604 |
| | Ounces..... | \$726,222 | \$683,761 | \$490,345 |
| | Platinum salts..... | 1,561 | 19,068 | 7,312 |
| | Ounces..... | \$19,123 | \$175,682 | \$54,600 |
| | Chloroform..... | 1,861,435 | 616,679 | 396,540 |
| | Pounds..... | \$472,759 | \$165,804 | \$98,070 |
| | Ether..... | 1,177,858 | 660,783 | 263,238 |
| | Pounds..... | \$199,448 | \$334,935 | \$129,876 |
| | Acetone..... | 6,927,886 | 1,300,396 | 1,638,715 |
| | Pounds..... | \$719,895 | \$161,320 | \$178,696 |
| | Value..... | \$5,199,594 | \$1,248,898 | \$1,426,373 |
| | All other..... | | | |
| | Chemicals not elsewhere specified: | | | |
| | Glycerin..... | 33,986,974 | 18,791,997 | 15,263,798 |
| | Pounds..... | \$4,838,826 | \$2,345,206 | \$2,612,886 |
| | Epsom salts..... | 47,785,318 | 15,935,837 | 6,672,309 |
| | Pounds..... | \$357,728 | \$145,801 | \$45,966 |
| | Blue vitriol..... | 510,658 | 50,100 | 7,500,000 |
| | Pounds..... | \$37,626 | \$2,300 | \$375,000 |

For footnotes, see page 496.

| Table 66— Contd. | PRODUCT. | 1909 | 1904 | 1899 |
|---|----------|--------------|------------------|------------------|
| Chemicals not elsewhere specified— Continued. | | | | |
| Copperas— | | | | |
| Pounds..... | | 24,199,526 | 8,815,059 | 14,097,905 |
| Value..... | | \$71,081 | \$28,061 | \$58,581 |
| Phosphates of soda— | | | | |
| Pounds..... | | 35,178,354 | 12,018,815 | 3,478,350 |
| Value..... | | \$684,202 | \$243,822 | \$104,554 |
| Tin salts— | | | | |
| Pounds..... | | 12,992,233 | 9,573,719 | 4,677,471 |
| Value..... | | \$1,194,546 | \$904,679 | \$470,159 |
| Zinc salts— | | | | |
| Pounds..... | | 43,204,652 | (¹) | (¹) |
| Value..... | | \$1,477,486 | (¹) | (¹) |
| Other chemicals..... | | \$21,207,939 | \$13,289,416 | |
| By-products and residues sold to other industries..... | | \$4,530,024 | \$5,743,070 | \$15,780,497 |

¹ In addition, products to the value of \$9,105,458 were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation, including the following:

| | Pounds. | Value. | | Pounds. | Value. |
|--------------------------------------|------------|-----------|-------------------------|------------|-----------|
| Acids: | | | Poxylin plastics..... | | \$282,560 |
| Acetic..... | 4,959,985 | \$200,740 | Compressed or liq- | | |
| Hydrofluoric..... | 2,051,951 | 79,722 | ued gases: | | |
| Muriatic..... | 74,805,743 | 587,253 | Anhydrous am- | | |
| Oleic..... | 2,959,346 | 165,091 | moniac..... | 167,710 | 40,923 |
| Stearic..... | 5,004,774 | 399,386 | Carbon dioxide..... | 454,354 | 19,202 |
| Other ^a | | 49,530 | Laughing gas..... | 24,500 | 4,900 |
| Sodas: | | | Oxygen.....gals. | 23,820,325 | 79,319 |
| Sal soda.....tons. | 10,822 | 184,297 | Other..... | | 9,072 |
| Other ^b.....tons. | 75,902 | 1,835,292 | Chloroform..... | 8,250 | 4,779 |
| Potashes..... | 14,293,552 | 525,054 | Acetone..... | 2,007,560 | 210,287 |
| Alums..... | 40,450,260 | 443,513 | Glycerin..... | 1,022,920 | 123,472 |
| Coal-tar distillery products..... | | 1,610,792 | Blue vitriol..... | 37,185,585 | 1,490,645 |
| Bleaching materials: | | | Copperas..... | 3,031,566 | 53,372 |
| Hydrogen per- | | | Phosphates of soda..... | 310,588 | 27,034 |
| oxide..... | 521,851 | 20,124 | Zinc salts..... | 4,312,988 | 103,593 |
| Bisulphite..... | 3,002,000 | 23,650 | Other chemicals..... | | 505,183 |
| Other..... | | 20,703 | | | |

^a Not including acids reported by manufacturers of explosives and fertilizers.

^b Including sodas reported by manufacturers of paints and varnishes and fertilizers.

^c Not including 4,871,014 pounds, value \$448,455, reported by manufacturers of coke.

^d Not including 52,518,919 pounds, value \$6,790,264, reported by manufacturers of soap.

² In addition, products to the value of \$3,033,397 were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation, including the following:

| | Pounds. | Value. | | Pounds. | Value. |
|--------------------------------------|------------|-----------|----------------------|-----------|----------|
| Acids: | | | Bleaching materials: | | |
| Muriatic..... | 47,018,080 | \$431,938 | Bisulphite.....tons. | 536 | \$11,937 |
| Stearic..... | 1,750,000 | 140,000 | Glycerin..... | 520,000 | 53,000 |
| Hydrofluoric..... | 1,217,578 | 71,668 | Ether..... | 103,028 | 92,466 |
| Other..... | | 146,710 | Epsom salts..... | 1,350,000 | 13,500 |
| Sodas: | | | Blue vitriol..... | 107,160 | 5,994 |
| Sal soda.....tons. | 1,703 | 29,561 | Copperas..... | 81,816 | 586 |
| Caustic.....tons. | 14 | 668 | Tin salts..... | 1,103,222 | 188,301 |
| Other.....tons. | 14,200 | 368,705 | Other chemicals..... | | 742,467 |
| Alums..... | 33,074,349 | 532,185 | | | |
| Coal-tar distillery products..... | | 238,645 | | | |

³ See Table 80 for sulphuric, nitric, and mixed acids.

⁴ Not reported separately.

⁵ See chemical substances produced by the aid of electricity for additional product.

⁶ Not reported.

Coke.—Table 67, which presents the statistics for the manufacture of coke, does not include those for gas-house coke, which are shown in Table 71. The total production of coke, including gas-house coke sold and that made and consumed in gas manufacture, was 41,947,949 tons in 1909 as compared with 27,857,441 tons in 1904, an increase of 50.6 per cent. The gas-house coke included in these figures formed 6.3 per cent of the total product in 1909 and 9.9 per cent in 1904.

The value of all products of the coke industry proper was \$98,078,383 in 1909, \$51,728,647 in 1904, and \$35,585,445 in 1899, an increase for the decade of 175.6 per cent. A marked feature of the industry is the increasing use of retort ovens. Although the

retort coke product was not reported separately in 1899, the by-products of this branch of the industry were given and aggregated \$952,027 in value. In 1909 the value of the retort by-products was \$8,112,900. The value of the coke and by-products made by retort ovens constituted 29.1 per cent of the total value of all products of the industry in 1909. Of the total value of the products made by retort ovens, two-fifths is contributed by the by-products. The ton of 2,000 pounds is used in showing quantities.

| Table 67 | 1909 | 1904 | 1899 |
|--|------------------|------------------|------------------|
| MATERIALS. | | | |
| Total cost..... | \$65,888,124 | \$29,884,532 | \$19,665,532 |
| Coal charged into ovens: | | | |
| Tons..... | 159,354,937 | 36,781,006 | 30,157,829 |
| Run of mine— | | | |
| Unwashed..... | 40,594,842 | 24,872,731 | 20,844,637 |
| Washed..... | 6,007,760 | 2,649,251 | 1,457,961 |
| Slack— | | | |
| Unwashed..... | 6,926,484 | 4,414,326 | 5,036,675 |
| Washed..... | 5,825,851 | 4,844,698 | 2,818,556 |
| Cost..... | \$62,203,382 | \$28,360,121 | \$18,355,252 |
| All other materials..... | \$3,184,742 | \$1,524,411 | \$1,310,280 |
| PRODUCTS. | | | |
| Total value..... | \$98,078,383 | \$51,728,647 | \$35,585,445 |
| Coke: ¹ | | | |
| Tons..... | 39,315,065 | 24,733,063 | 19,640,798 |
| Value..... | \$89,905,483 | \$49,002,051 | \$34,633,418 |
| Made in beehive ovens— | | | |
| Tons..... | 33,060,421 | 22,516,280 | (²) |
| Value..... | \$69,530,794 | \$42,885,773 | (²) |
| Made in retort or by-product ovens— | | | |
| Tons..... | 6,254,644 | 2,216,783 | (²) |
| Value..... | \$20,434,689 | \$6,116,278 | (²) |
| By-products obtained from retort or by-product ovens— | | | |
| Gas made, cubic feet (thousands) .. | 76,590,763 | 18,761,101 | (²) |
| Used in process or wasted, cubic feet (thousands)..... | 00,709,543 | 14,878,301 | (²) |
| Sold— | | | |
| Cubic feet (thousands)..... | 15,791,220 | 3,882,800 | 1,171,943 |
| Value..... | \$2,609,211 | \$684,464 | \$226,022 |
| Tar— | | | |
| Gallons..... | 60,126,006 | 23,074,225 | 10,468,733 |
| Value..... | \$1,408,611 | \$551,838 | \$207,952 |
| Ammonia, sulphate or reduced to equivalent in sulphate— | | | |
| Pounds..... | 123,111,107 | 26,050,713 | 11,984,931 |
| Value..... | \$3,227,316 | \$684,427 | \$330,921 |
| Anhydrous ammonia— | | | |
| Pounds..... | 4,871,014 | (³) | (³) |
| Value..... | \$448,455 | (³) | (³) |
| Ammonia liquor— | | | |
| Gallons..... | (³) | 4,330,679 | 1,572,325 |
| Value..... | (³) | \$997,044 | \$180,642 |
| All other..... | \$410,307 | \$111,225 | \$7,490 |
| EQUIPMENT. | | | |
| Ovens, number in existence at end of year..... | 103,982 | 76,099 | 47,142 |
| Building at end of year..... | 2,950 | 2,127 | (⁴) |
| Abandoned during the year..... | 201 | 178 | (⁴) |

¹ Includes coal and coking products produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation, viz: Coal used, unwashed, 560,539 tons, cost, \$1,303,597; products valued at \$2,381,761, comprising retort coke, 415,472 tons, valued at \$1,464,162; tar, 4,398,576 gallons, valued at \$87,639; ammonium sulphate, 9,952,744 pounds, valued at \$235,605; gas sold, 2,160,915 thousand cubic feet, valued at \$534,075; and other products, \$60,280.

² In addition, 410,225 tons of coke, valued at \$1,302,572, were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

³ The statement for coke made in gas establishments will be found in detail under the classification "Gas, illuminating and heating."

⁴ Not reported.

⁵ Reported in part as anhydrous ammonia and in part as ammonium sulphate or reduced equivalents.

Dyestuffs and extracts.—The statistics for dyestuffs and extracts given in Table 68 cover the products of establishments manufacturing the same for sale, and do not include those made by dye and print works or tanneries and consumed by the same in further processes of manufacture.

The total value of products was \$15,954,574 in 1909 and \$7,350,748 in 1899, an increase of 117 per cent. The chief products were oak and chestnut extract,

which together increased almost ninefold in quantity and even more in value during the decade. Artificial dyestuffs nearly doubled in quantity and in value, but the production of natural dyestuffs (included under "All other products") has fallen off greatly, the value of the product being \$1,035,711 in 1899 and only \$233,935 in 1904. It was materially less in 1909, but can not be shown separately without disclosing individual operations. The census report on Forest Products for 1909 gives 386,817,895 pounds as the total consumption of tanning extracts in that year, which quantity exceeds the quantity of oak, chestnut, hemlock, and sumac extracts here reported by over 83,000,000 pounds. This difference can be taken as representing approximately the amount of tanning extract imported or made and consumed in tanning establishments.

| Table 68 | PRODUCT. | 1909 | 1904 | 1899 |
|---------------------------------------|--------------------------|---------------------|---------------------|--------------------|
| | Total value | \$15,954,574 | \$10,893,113 | \$7,350,748 |
| Artificial dyestuffs: | | | | |
| Pounds..... | 12,267,399 | 4,600,462 | 6,581,850 | |
| Value..... | \$3,402,430 | \$1,764,454 | \$1,806,730 | |
| Extracts: | | | | |
| Hemlock— | | | | |
| Pounds..... | 12,588,078 | 18,833,450 | 26,011,714 | |
| Value..... | \$280,487 | \$406,619 | \$563,591 | |
| Logwood— | | | | |
| Pounds..... | 22,317,248 | 29,799,606 | 39,252,743 | |
| Value..... | \$991,974 | \$1,472,047 | \$1,485,971 | |
| Oak and chestnut— | | | | |
| Pounds..... | 287,908,285 | 156,520,123 | 28,983,036 | |
| Value..... | \$6,061,102 | \$2,411,184 | \$529,670 | |
| Sumac— | | | | |
| Pounds..... | 3,148,790 | 4,083,619 | 4,349,742 | |
| Value..... | \$107,450 | \$95,958 | \$103,085 | |
| Ground sumac: | | | | |
| Pounds..... | 554,032 | 5,061,333 | 9,284,000 | |
| Value..... | \$24,531 | \$65,190 | \$114,660 | |
| Ground bark: | | | | |
| Pounds..... | 25,142,076 | 38,001,017 | 27,028,000 | |
| Value..... | \$176,510 | \$249,101 | \$149,365 | |
| Ground and chipped wood: | | | | |
| Pounds..... | 15,046,954 | 9,999,906 | 12,690,037 | |
| Value..... | \$143,720 | \$95,237 | \$201,931 | |
| Gums and dextrans: | | | | |
| Pounds..... | 16,148,931 | 6,651,731 | (²) | |
| Value..... | \$610,999 | \$231,708 | (²) | |
| Iron liquors: | | | | |
| Pounds..... | 3,079,418 | 1,800,744 | 954,240 | |
| Value..... | \$30,282 | \$30,757 | \$7,525 | |
| Mordants: | | | | |
| Pounds..... | 1,735,887 | 733,245 | 734,000 | |
| Value..... | \$99,515 | \$64,656 | \$85,466 | |
| Sizes: | | | | |
| Pounds..... | 54,054,711 | 7,812,433 | 101,920 | |
| Value..... | \$1,735,600 | \$217,859 | \$2,548 | |
| Tannic acid: | | | | |
| Pounds..... | 5,085,748 | 5,165,500 | 1,326,515 | |
| Value..... | \$249,297 | \$200,136 | \$149,662 | |
| Turkey-red oil: | | | | |
| Pounds..... | 1,048,719 | 3,022,470 | 2,210,000 | |
| Value..... | \$72,053 | \$159,666 | \$14,757 | |
| Other tanning liquors: | | | | |
| Pounds..... | 9,285,048 | 44,418,929 | 16,144,292 | |
| Value..... | \$365,304 | \$1,704,243 | \$405,659 | |
| All other products ¹ | \$1,573,248 | \$1,724,298 | \$1,730,128 | |

¹ In addition, dyestuffs and extracts, to the value of \$834,102, in 1909 and \$19,111 in 1904, were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² Not reported separately.

³ Including a small production of natural dyestuffs in 1909, a production in 1904 valued at \$233,935, and a production in 1899 valued at \$1,035,711.

NOTE.—The following products were made and consumed in establishments where produced:

| | 1909 | 1904 |
|--------------------------------------|-------------|-------------|
| Ground and chipped wood.....pounds.. | 936,578,482 | 524,505,744 |
| Ground bark.....pounds.. | 293,062,168 | 40,390,640 |
| Ground leaves.....pounds.. | 1,955,040 | 3,588,171 |

Explosives.—Table 69 presents the statistics for the explosives industry. The value of all products was \$40,139,661 in 1909 as compared with \$17,125,418 in 1899, an increase of 134.4 per cent.

The production of explosives in the industry proper was 469,481,252 pounds in 1909, 360,980,734 pounds in 1904, and 215,980,720 pounds in 1899, an increase for the decade of 117.4 per cent. If the explosives made by establishments operated by the Federal Government and by establishments engaged primarily in the manufacture of other products be added, the total production in 1909 was 471,181,650 pounds. The output of dynamite formed about three-eighths of the total output of explosives, and its value approximately one-half of the total value of explosives reported. The most important product in respect to quantity of output was blasting powder, including "permissible explosives." Permissible explosives, known in Pennsylvania as safety explosives, were reported separately for the first time in 1909. They are specially designed for use in dusty and gaseous coal mines. The *ton of 2,000 pounds* is used in showing quantities.

| Table 69 | 1909 | 1904 | 1899 |
|--------------------------------|---------------------|---------------------|---------------------|
| MATERIALS. | | | |
| Total cost | \$22,811,548 | \$17,993,667 | \$10,334,974 |
| Nitrate of soda: | | | |
| Tons..... | 188,880 | 133,034 | 88,324 |
| Cost..... | \$7,892,336 | \$5,608,557 | \$2,942,866 |
| Acids: | | | |
| Mixed— | | | |
| Pounds..... | 51,764,694 | 105,522,494 | 66,906,146 |
| Cost..... | \$1,532,626 | \$3,085,429 | \$1,535,754 |
| Nitric— | | | |
| Pounds..... | 7,591,756 | 2,699,500 | 467,557 |
| Cost..... | \$541,314 | \$122,647 | \$17,171 |
| Sulphuric— | | | |
| Tons..... | 22,501 | 18,298 | 7,864 |
| Cost..... | \$406,204 | \$347,391 | \$120,009 |
| Sulphur or brimstone: | | | |
| Tons..... | 17,389 | 19,574 | 12,742 |
| Cost..... | \$367,806 | \$567,490 | \$317,383 |
| All other materials..... | \$12,091,202 | \$7,624,864 | \$5,461,101 |
| PRODUCTS. | | | |
| Total value | \$40,139,661 | \$39,602,834 | \$17,125,418 |
| Dynamite: | | | |
| Pounds..... | 177,155,851 | 130,920,829 | 85,846,456 |
| Value..... | \$18,689,746 | \$12,909,153 | \$8,247,222 |
| Nitroglycerin, sold as such: | | | |
| Pounds..... | 28,913,253 | 7,935,936 | 3,618,602 |
| Value..... | \$3,162,434 | \$1,620,117 | \$783,290 |
| Blasting powder: | | | |
| Kegs (25 pounds)..... | 9,339,087 | 8,217,448 | 3,907,612 |
| Value..... | \$9,608,365 | \$7,377,977 | \$3,567,974 |
| Permissible explosives: | | | |
| Pounds..... | 9,607,448 | (²) | (²) |
| Value..... | \$893,269 | (²) | (²) |
| Gunpowder: | | | |
| Pounds..... | 12,862,700 | 10,363,944 | 25,628,804 |
| Value..... | \$1,736,427 | \$1,541,483 | \$1,432,377 |
| Other explosives: ⁴ | | | |
| Pounds..... | 7,464,825 | 6,303,825 | 3,201,468 |
| Value..... | \$3,913,787 | \$4,256,193 | \$2,610,163 |
| All other products..... | \$2,155,793 | \$1,906,921 | \$174,442 |

¹ In addition, 1,481,042 pounds, to the value of \$802,948, were made by Federal establishments, and 219,356 pounds, to the value of \$135,979, by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² In addition, 1,104,532 pounds, to the value of \$600,692, were made by Federal establishments and by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

³ Not reported separately.

⁴ Includes smokeless powder and gun-cotton or pyroxylin, to avoid disclosing operations of individual establishments.

NOTE.—The following products were made and consumed in the establishments where produced:

| | 1909 | 1904 |
|---------------------------------|------------|------------|
| Salt-peter.....pounds.. | 12,050,225 | 3,539,376 |
| Nitroglycerin.....pounds.. | 79,289,667 | 41,077,828 |
| Sulphuric acid.....tons.. | 42,565 | 30,994 |
| Nitric acid.....tons.. | 31,484 | 18,988 |
| Charcoal.....bushels.. | 737,884 | 1,159,918 |
| Cellulose nitrates.....pounds.. | 5,000,226 | |
| Nitrate of ammonia.....pounds.. | 10,904,319 | 6,299,317 |

Fertilizers.—The following table giving statistics for the fertilizer industry does not include the product of establishments engaged primarily in the manufacture of products other than fertilizers, chief of which are slaughtering and meat-packing establishments and cottonseed-oil mills. The value of all products of the industry proper, which includes some that are not fertilizers, was \$103,960,213 in 1909, as compared with \$44,657,385 in 1899, an increase of 132.8 per cent. Including the fertilizer by-products of other indus-

tries, the total production of fertilizers in 1909 was 5,618,234 tons, valued at \$100,089,971. During the period 1899–1909 the tonnage of the fertilizer products of the establishments engaged primarily in the manufacture of fertilizers increased 87.5 per cent. Some of the materials, such as sulphuric acid, are the products of establishments engaged in this industry, and therefore are duplicated in the total value of products. The *ton of 2,000 pounds* is used in showing quantities.

| Table 70 | 1909 | 1904 | 1899 | | 1909 | 1904 | 1899 |
|--------------------------|--------------|--------------|--------------|--|---------------|--------------|--------------|
| MATERIALS. | | | | PRODUCTS. | | | |
| Total cost..... | \$69,521,920 | \$39,287,914 | \$28,958,473 | Total value..... | \$103,960,213 | \$56,541,253 | \$44,657,385 |
| Ammoniates: | | | | Fertilizers: | | | |
| Tons..... | 778,639 | 10,915,648 | 19,034,146 | Tons..... | 5,240,164 | 3,267,777 | 2,794,705 |
| Cost..... | \$16,065,978 | \$800,850 | \$180,600 | Value..... | \$92,360,631 | \$50,460,094 | \$40,546,661 |
| Ammonium sulphate: | | | | Superphosphates from minerals, | | | |
| Tons..... | 63,381 | 10,540 | 4,120 | bones, etc.— | | | |
| Cost..... | \$3,640,592 | | | Tons..... | 1,201,354 | 766,338 | 923,198 |
| Kalnit: | | | | Value..... | \$13,318,520 | \$7,515,267 | \$8,471,943 |
| Tons..... | 322,720 | 190,493 | 54,700 | Ammoniated— | | | |
| Cost..... | \$2,783,658 | \$1,891,073 | \$520,833 | Tons..... | 472,757 | 775,987 | 142,868 |
| Nitrate of soda: | | | | Value..... | \$10,061,193 | \$12,901,057 | \$2,449,388 |
| Tons..... | 85,714 | 42,213 | 19,518 | Concentrated phosphate— | | | |
| Cost..... | \$3,730,070 | \$1,700,432 | \$709,841 | Tons..... | 313,888 | (?) | (?) |
| Phosphate rock: | | | | Value..... | \$3,638,210 | (?) | (?) |
| Tons..... | 1,520,124 | 888,571 | 787,927 | Complete— | | | |
| Cost..... | \$8,621,094 | \$4,244,554 | \$3,554,174 | Tons..... | 2,717,797 | 1,329,149 | 1,436,682 |
| Potash salts: | | | | Value..... | \$57,243,809 | \$26,073,511 | \$26,446,046 |
| Tons..... | 257,766 | 122,107 | (?) | Other— | | | |
| Cost..... | \$7,327,549 | \$3,606,701 | \$3,098,400 | Tons..... | 534,368 | 394,703 | 291,927 |
| Pyrites: | | | | Value..... | \$8,107,800 | \$4,370,809 | \$4,178,284 |
| Tons..... | 456,574 | 342,962 | 288,778 | Sulphuric acid (reduced to 50° Baumé): | | | |
| Cost..... | \$2,831,994 | \$2,020,759 | \$1,460,285 | Tons..... | 153,057 | 24,502 | 71,176 |
| Sulphuric acid: | | | | Value..... | \$923,492 | \$194,578 | \$437,925 |
| Tons..... | 603,672 | 197,865 | 231,527 | Other acids— | | | |
| Cost..... | \$3,312,687 | \$1,084,304 | \$1,355,382 | Tons..... | 30,651 | 45,689 | (?) |
| Sulphur or brimstone: | | | | Value..... | \$611,288 | \$241,500 | \$17,872 |
| Tons..... | 4,236 | 4,210 | 12,728 | All other products..... | \$10,055,802 | \$5,644,475 | \$3,655,927 |
| Cost..... | \$68,924 | \$92,234 | \$268,670 | | | | |
| Superphosphates: | | | | | | | |
| Tons..... | 415,656 | 320,559 | 286,898 | | | | |
| Cost..... | \$3,946,440 | \$2,912,010 | \$2,176,245 | | | | |
| Fish..... | \$3,031,437 | \$847,142 | \$183,542 | | | | |
| All other materials..... | \$14,161,497 | \$10,312,201 | \$5,504,347 | | | | |

¹ Includes for 1904, 125,888 tons of ammoniates classified as such, valued at \$2,445,051; cottonseed meal, valued at \$2,370,448; and bones, tankage, and offal, valued at \$5,094,149; and for 1899, cottonseed meal, valued at \$167,410; and bones, tankage, and offal, valued at \$9,760,735.

² Not reported.

³ In addition, in 1909, 231,287 tons of complete fertilizer, valued at \$4,806,832; 49,632 tons of ammoniated fertilizer, valued at \$943,197; 22,615 tons of superphosphates, valued at \$426,302; 63,581 tons of "other" fertilizer, valued at \$1,366,931; 10,955 tons of concentrated phosphate, valued at \$178,078; and other products to the value of \$190,928; and in 1904, fertilizers, to the value of \$2,009,714, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

NOTE.—The following products were made and consumed in establishments where produced:

| | 1909 | 1904 |
|----------------------------|-----------|---------|
| Acid phosphate..... tons.. | 1,838,885 | 884,211 |
| Sulphuric acid..... tons.. | 841,935 | 692,904 |

Gas, illuminating and heating.—The statistics for the gas industry presented in Table 71 include only those establishments which made gas as their main product. The total production of gas made for sale by such establishments and by retort coke ovens combined—but not including the by-products of establishments outside these two industries—was in 1909, 166,627,013 thousand cubic feet, valued at \$141,224,520; in 1904, 116,432,779 thousand cubic feet, valued at \$113,347,032; and in 1899, 68,265,496 thousand cubic feet, valued at \$69,657,604. The increase in quantity for the period 1899–1909 was thus 144.1 per cent, and that in value 102.7 per cent. In addition to the product above reported for 1909, 1,730,563 thousand cubic feet were made and con-

sumed in gas plants and 60,799,543 thousand cubic feet were made and consumed or wasted by retort coking establishments. There is also a large consumption of producer gas and blast-furnace gas by establishments in other industries which produced the gas themselves.

The value of products of the illuminating-gas industry proper aggregated \$166,814,371 in 1909 as compared with \$75,716,693 in 1899, an increase of 120.3 per cent. Only about four-fifths of this value represents that of the gas itself. The industry shows a progressive decrease from census to census in unit values for all kinds of gas with the exception of acetylene gas. The *ton of 2,000 pounds* is used for showing quantities.

| Table 71 | 1909 | 1904 | 1899 |
|--|---------------|---------------|------------------|
| MATERIALS. | | | |
| Total cost..... | \$52,427,844 | \$37,180,066 | \$20,605,356 |
| Coal: | | | |
| Tons..... | 4,940,598 | 4,431,774 | 2,487,287 |
| Cost..... | \$16,304,832 | \$14,607,435 | \$7,164,472 |
| Oil: | | | |
| Gallons..... | 579,657,152 | 410,989,564 | 194,857,296 |
| Cost..... | \$17,345,750 | \$15,015,602 | \$8,168,657 |
| Coke: | | | |
| Tons..... | 591,919 | 435,534 | 217,354 |
| Cost..... | \$2,667,706 | \$1,602,762 | \$726,736 |
| All other materials..... | \$16,109,556 | \$5,954,217 | \$4,545,491 |
| PRODUCTS. | | | |
| Total value..... | \$166,814,371 | \$125,144,945 | \$75,716,693 |
| Gas: ¹ | | | |
| Cubic feet (thousands)..... | 150,835,793 | 112,549,979 | 67,093,553 |
| Value..... | \$138,615,309 | \$112,602,568 | \$69,432,582 |
| Straight coal— | | | |
| Cubic feet (thousands)..... | 19,985,253 | 12,693,034 | (²) |
| Value..... | \$18,065,841 | \$12,893,004 | (²) |
| Straight water— | | | |
| Cubic feet (thousands)..... | 1,726,082 | 715,550 | (²) |
| Value..... | \$1,289,031 | \$832,440 | (²) |
| Carburetted water— | | | |
| Cubic feet (thousands)..... | 79,418,486 | 54,687,418 | (²) |
| Value..... | \$69,513,749 | \$48,071,189 | (²) |
| Mixed coal and water— | | | |
| Cubic feet (thousands)..... | 40,775,283 | 40,980,414 | (²) |
| Value..... | \$36,953,543 | \$45,605,263 | (²) |
| Oil— | | | |
| Cubic feet (thousands)..... | 8,688,860 | 3,441,352 | (²) |
| Value..... | \$12,111,458 | \$5,141,460 | (²) |
| Acetylene— | | | |
| Cubic feet (thousands)..... | 25,186 | 7,881 | (²) |
| Value..... | \$361,348 | \$104,267 | (²) |
| All other— | | | |
| Cubic feet (thousands)..... | 216,643 | 24,330 | (²) |
| Value..... | \$320,339 | \$39,354 | (²) |
| Coke: | | | |
| Bushels..... | 82,049,683 | 89,146,434 | |
| Value..... | \$5,723,215 | \$5,195,461 | |
| Tar: | | | |
| Gallons..... | 78,339,880 | 67,515,421 | \$4,283,204 |
| Value..... | \$1,875,549 | \$2,064,343 | |
| All other products..... | \$13,556,908 | \$972,992 | |
| Receipts from rents and sales of lamps and appliances..... | \$7,043,390 | \$4,249,581 | \$2,000,907 |

¹ Does not include \$4,013,885 paid for lamps and appliances.

² In addition, products of gas manufacture to the value of \$261,802 were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation. The items covered by these products were 27,558 (thousands) cubic feet of coal gas, valued at \$29,419; 13,070 (thousands) cubic feet of acetylene gas, valued at \$224,618; 44,347 bushels of coke, valued at \$3,399; 38,370 gallons of tar, valued at \$1,372; and receipts from sale of lamps and appliances to the amount of \$2,994.

³ Statistics of the gas made in coke establishments are shown in detail under the classification "Coke."

⁴ Not reported separately.

⁵ In addition, there were 13,813,058 gallons for which no value was reported.

⁶ Includes 49,720,220 gallons of ammonia liquor, valued at \$725,702, and 1,154,319 pounds of hydrocarbons, valued at \$44,509.

NOTE.—The following products were made and consumed in establishments where produced:

| | 1909 | 1904 |
|------------------------------------|------------|------------|
| Coke.....bushels..... | 49,550,153 | 46,561,185 |
| Tar.....gallons..... | 31,690,178 | 14,772,878 |
| Gas, cubic feet.....thousands..... | 1,730,563 | 1,363,757 |
| Benzene or benzol..... | 302,994 | |

Glucose and starch.—Statistics are presented in Table 72 for the glucose and starch industry for the years 1909 and 1904.

Corn is the principal material used. The value of all products of the industry was \$48,799,311 in 1909 and \$32,649,836 in 1904, the increase for the five-year period being 49.5 per cent. The starch product (gross, including duplication), increased in quantity 89.9 per cent and in value 60.3 per cent, the entire gain being in cornstarch. The percentages of increase in the value of glucose, grape sugar, and corn oil are large, notably that for corn oil. In 1899 the production of starch (in part estimated) was 543,040,000 pounds, greatly exceeding the figures for 1904. The decrease in production from 1899 to 1904 was due in

large measure to the decrease in the export trade of this commodity.

Some establishments included in the industry are engaged primarily in reprocessing starch, resulting in a duplication of products. In 1909 105,299,010 pounds of cornstarch were used as material by such factories, 104,597,648 pounds of cornstarch being obtained as products. The deduction of this duplication from the total gives the quantity of marketable cornstarch produced in 1909 as 534,227,718 pounds.

| Table 72 | 1909 | 1904 |
|--------------------------------|---------------|------------------|
| MATERIALS. | | |
| Total cost..... | \$36,898,771 | \$25,518,876 |
| Corn: | | |
| Pounds..... | 2,249,508,915 | (¹) |
| Cost..... | \$20,674,779 | \$19,074,728 |
| Wheat and roots: | | |
| Pounds..... | 1,940,000 | (²) |
| Cost..... | \$21,435 | (²) |
| Potatoes: | | |
| Pounds..... | 210,008,127 | 209,372,549 |
| Cost..... | \$541,369 | \$593,661 |
| Cornstarch: | | |
| Pounds..... | 105,299,010 | (²) |
| Cost..... | \$1,763,173 | (²) |
| Wheat flour: | | |
| Pounds..... | 19,545,824 | (²) |
| Cost..... | \$482,263 | (²) |
| All other materials..... | \$7,415,762 | \$5,880,497 |
| PRODUCTS. | | |
| Total value..... | \$48,799,311 | \$32,649,836 |
| Starch: | | |
| Pounds..... | 677,535,647 | 356,695,335 |
| Value..... | \$17,514,523 | \$10,927,558 |
| Corn— | | |
| Pounds..... | 608,825,396 | 311,149,814 |
| Value..... | \$15,962,916 | \$8,878,456 |
| Wheat and root— | | |
| Pounds..... | 12,127,686 | 17,845,121 |
| Value..... | \$626,337 | \$1,124,612 |
| Potato— | | |
| Pounds..... | 26,582,595 | 27,709,490 |
| Value..... | \$925,570 | \$924,476 |
| Glucose, including all sirups: | | |
| Pounds..... | 769,660,210 | (¹) |
| Value..... | \$17,922,514 | \$12,352,616 |
| Grape sugar: | | |
| Pounds..... | 159,069,478 | (¹) |
| Value..... | \$3,620,816 | \$2,254,745 |
| Corn oil: | | |
| Gallons..... | 8,164,175 | (¹) |
| Value..... | \$2,802,768 | \$1,164,466 |
| Stock food..... | \$5,013,968 | \$4,440,479 |
| All other products..... | \$924,422 | \$1,500,592 |

¹ Not reported.

² Not reported separately.

³ In addition, 1,379,691 pounds of cornstarch, valued at \$48,069, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

Cottonseed oil and cake.—The following table presents the statistics for cottonseed products:

| Table 73 | 1909 ¹ | 1904 ² | 1899 |
|---|-------------------|-------------------|--------------|
| Cottonseed crushed.....tons.. | 2,798,549 | 2,308,930 | 2,479,386 |
| PRODUCTS. | | | |
| Total value..... | \$147,867,894 | \$98,407,621 | \$58,726,632 |
| Primary products manufactured, whether for sale or for further use: | | | |
| Oil.....gallons..... | 157,115,689 | 132,651,801 | 93,325,729 |
| Meal and cake.....tons..... | 1,661,734 | 1,343,977 | 884,391 |
| Hulls.....tons..... | 1,258,612 | 1,201,079 | 1,199,286 |
| Linters.....pounds..... | 174,630,099 | 116,707,398 | 57,272,653 |

¹ In addition, products to the value of \$2,017,65 were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation; these establishments crushed 28,752 tons of seed and produced 1,212,852 gallons of crude oil, 12,811 tons of meal and cake, 8,926 tons of hulls, and 1,152,978 pounds of linters.

² In addition, establishments engaged primarily in the manufacture of products other than those covered by the industry designation crushed 36,449 tons of seed and produced 1,765,971 gallons of crude oil, 15,195 tons of meal and cake, 12,265 tons of hulls, and 1,085,671 pounds of linters.

The amount of seed crushed in mills engaged primarily in the industry increased from 2,479,386 tons in 1899 to 3,798,549 tons in 1909, or 53.2 per cent, while the value

of all products, including fertilizer, ice, feed, etc., where carried on in connection with the manufacture of cottonseed products, increased from \$58,726,632 to \$147,867,894, or 151.8 per cent. A marked feature of the industry is the progressive increase in quantity of oil, meal, and linters, and decrease in quantity of hulls per ton of seed crushed. The *ton of 2,000 pounds* is used for showing quantities.

Oil, essential.—The products of the essential-oil industry, given in the following table, increased in value from \$813,495 in 1899 to \$1,737,234 in 1909, or 113.6 per cent. The output of natural oils increased in value 58.2 per cent, and of witch-hazel over sevenfold.

| Table 74 | PRODUCT. | 1909 | 1904 | 1899 |
|-------------|-------------------------|-------------|-------------|-----------|
| | Total value..... | \$1,737,234 | \$1,464,662 | \$813,495 |
| | Natural oils..... | \$1,108,003 | \$1,023,937 | \$700,709 |
| | Peppermint— | | | |
| | Pounds..... | 305,781 | 130,022 | 202,550 |
| | Value..... | \$510,070 | \$470,037 | \$188,559 |
| | Black birch— | | | |
| | Pounds..... | 67,053 | (2) | (2) |
| | Value..... | \$102,045 | (2) | (2) |
| | Spearmint— | | | |
| | Pounds..... | 33,400 | (2) | (2) |
| | Value..... | \$33,283 | (2) | (2) |
| | Wintergreen— | | | |
| | Pounds..... | 22,281 | 4,737 | 2,166 |
| | Value..... | \$68,983 | \$15,579 | \$3,038 |
| | Other— | | | |
| | Pounds..... | (2) | 327,908 | 638,024 |
| | Value..... | \$335,213 | \$538,321 | \$508,512 |
| | Witch-hazel: | | | |
| | Gallons..... | 679,190 | 797,700 | 110,260 |
| | Value..... | \$412,322 | \$367,873 | \$54,049 |
| | All other products..... | \$216,309 | \$72,852 | \$58,137 |

¹ In addition, essential oils to the value of \$117,480 in 1909 and \$14,500 in 1904 were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² Not reported separately.

³ The products classified under this head include 49,327 pounds, valued at \$44,494; quantities not reported for the remainder.

Paint and varnish.—The inquiry at the present census in regard to specific materials used in the manufacture of paints and varnishes was confined to pig lead and alcohol, the comparative statistics for which, including establishments engaged primarily in the manufacture of products other than those covered by the industry designation, are as follows:

| Table 75 | MATERIAL. | 1909 | 1904 | 1899 |
|-------------|--------------------------|--------------|--------------|-------------|
| | Pig lead: | | | |
| | Tons (2,000 pounds)..... | 145,917 | 129,629 | 99,052 |
| | Cost..... | \$12,014,859 | \$11,214,961 | \$8,585,688 |
| | Alcohol: | | | |
| | Gallons..... | 1,083,382 | 1,416,740 | 388,368 |
| | Cost..... | \$920,086 | \$928,946 | \$461,417 |
| | Wood— | | | |
| | Gallons..... | 1,327,157 | 1,357,682 | 310,059 |
| | Cost..... | \$693,362 | \$790,243 | \$285,510 |
| | Grain— | | | |
| | Gallons..... | 356,225 | 59,064 | 78,309 |
| | Cost..... | \$226,724 | \$138,703 | \$175,907 |

The statistics for paint and varnish products are given in the following table, which does not include the pigments ground in establishments classified as engaged in the manufacture of kaolin and ground earths, the blacks made by establishments classified as engaged in the manufacture of bone, carbon, and lamp black, nor lead or zinc oxide made by lead and zinc smelters. During the period 1899 to 1909 the value of all products increased from \$69,562,235 to \$124,889,422, or 79.5 per cent. Paints in oil constitute

the most important group. The output of pigments, including white lead in oil, increased 141.9 per cent, and that of varnishes and japans 69 per cent in value.

| Table 76 | PRODUCT. | 1909 | 1904 | 1899 |
|-------------|---|---------------|--------------|--------------|
| | Total value..... | \$124,889,422 | \$90,839,609 | \$69,562,235 |
| | Pigments..... | \$16,985,588 | \$11,965,806 | \$13,319,437 |
| | White lead, dry— | | | |
| | Pounds..... | 85,234,414 | 62,305,888 | 116,102,316 |
| | Value..... | \$3,921,803 | \$2,877,109 | \$4,211,181 |
| | Oxides of lead— | | | |
| | Pounds..... | 63,404,846 | 49,734,330 | 50,759,623 |
| | Value..... | \$3,662,062 | \$2,601,772 | \$2,550,340 |
| | Lampblack and other blacks— | | | |
| | Pounds..... | 1,810,445 | 757,244 | 1,065,000 |
| | Value..... | \$105,003 | \$49,869 | \$60,260 |
| | Iron oxides and other earth colors— | | | |
| | Pounds..... | 111,674,075 | 48,345,978 | 33,453,896 |
| | Value..... | \$876,331 | \$331,416 | \$318,122 |
| | Other dry colors— | | | |
| | Pounds..... | 162,409,565 | 98,194,081 | |
| | Value..... | \$6,874,333 | \$5,066,083 | |
| | Barytes— | | | |
| | Pounds..... | 49,496,025 | 22,299,980 | 167,479,090 |
| | Value..... | \$208,757 | \$134,174 | \$5,317,943 |
| | Pulp colors, sold moist— | | | |
| | Pounds..... | 28,435,722 | 25,351,515 | 20,060,935 |
| | Value..... | \$1,277,239 | \$915,383 | \$861,531 |
| | Paints in oil..... | \$56,763,296 | \$40,890,059 | |
| | White lead in oil— | | | |
| | Pounds..... | 246,567,570 | 216,496,450 | (2) |
| | Value..... | \$16,234,411 | \$11,228,889 | (2) |
| | Paste— | | | |
| | Pounds..... | 162,356,330 | 131,940,404 | 306,410,338 |
| | Value..... | \$11,279,459 | \$8,713,183 | \$17,601,459 |
| | Already mixed for use— | | | |
| | Gallons..... | 33,272,033 | 22,379,020 | 16,879,595 |
| | Value..... | \$30,249,426 | \$20,447,987 | \$14,864,126 |
| | Varnishes and japans..... | \$31,262,535 | \$22,871,486 | \$18,502,219 |
| | Oleo-resinous varnishes— | | | |
| | Gallons..... | 18,476,523 | | |
| | Value..... | \$17,350,113 | | |
| | Damar and similar turpentine and benzine varnishes— | | | |
| | Gallons..... | 3,481,231 | 17,162,719 | 14,282,851 |
| | Value..... | \$2,836,341 | \$15,702,997 | \$14,333,554 |
| | Spirit varnishes not turpentine— | | | |
| | Gallons..... | 1,181,746 | 1,553,562 | 549,811 |
| | Value..... | \$1,408,048 | \$2,180,713 | \$905,229 |
| | Pyroxylin varnishes— | | | |
| | Gallons..... | 1,880,141 | 148,320 | 160,127 |
| | Value..... | \$2,351,425 | \$162,163 | \$178,896 |
| | Dryers, japans and lacquers— | | | |
| | Gallons..... | 9,474,039 | (4) | (4) |
| | Value..... | \$5,094,973 | \$3,340,355 | \$3,084,610 |
| | All other..... | \$2,221,035 | \$1,479,258 | (2) |
| | Fillers..... | \$3,126,271 | \$2,344,636 | (2) |
| | Liquid— | | | |
| | Gallons..... | 1,159,560 | 1,051,148 | (2) |
| | Value..... | \$823,063 | \$785,617 | (2) |
| | Paste— | | | |
| | Pounds..... | 14,050,320 | | |
| | Value..... | \$887,048 | | |
| | Dry— | | | |
| | Pounds..... | 50,083,472 | 68,761,174 | (2) |
| | Value..... | \$295,728 | \$1,559,019 | (2) |
| | Putty— | | | |
| | Pounds..... | 63,502,048 | | |
| | Value..... | \$1,110,532 | | |
| | Water paints and kalsomine: | | | |
| | Dry or in paste— | | | |
| | Pounds..... | 47,405,265 | 27,932,447 | (2) |
| | Value..... | \$1,917,038 | \$924,807 | (2) |
| | Already mixed for use— | | | |
| | Gallons..... | 522,283 | 123,400 | (2) |
| | Value..... | \$61,909 | \$9,230 | (2) |
| | Linseed oil: | | | |
| | Gallons..... | 3,477,004 | (4) | (4) |
| | Value..... | \$1,912,594 | (2) | (2) |
| | Bleached shellac: | | | |
| | Pounds..... | 3,014,195 | (3) | (2) |
| | Value..... | \$578,650 | (2) | (2) |
| | All other products..... | \$12,281,481 | \$12,333,585 | \$5,274,944 |

¹ In addition, paints and varnishes, to the value of \$2,583,397 in 1909 and \$1,221,338 in 1904, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² Includes white lead in oil. ³ Not reported separately.

⁴ Not reported.

NOTE.—The following products were made and consumed in establishments where produced:

| | 1909 | 1904 |
|---|-------------|-------------|
| White lead, dry.....pounds.. | 162,702,089 | 122,288,484 |
| Lead oxides.....pounds.. | 4,526,425 | 13,589,147 |
| Varnishes.....gallons.. | 4,407,312 | 1,202,674 |
| Drying japans and dryers.....gallons.. | 3,090,756 | 988,979 |
| Collodion and other cellulose nitrate solutions.....gallons.. | 20,600 | 1,576,442 |
| Pyroxylin and other cellulose nitrates.....pounds.. | 24,760 | 12,000 |
| Coppers.....pounds.. | 11,531,006 | |

Petroleum refining.—The products of the petroleum-refining industry, statistics for which are presented in the following table, aggregated \$236,997,659 in value in 1909 as compared with \$123,929,384 in 1899, the increase during the decade being 91.2 per cent. This conforms closely to the increase in the cost of crude petroleum used, which was 89.4 per cent. The crude petroleum used increased in quantity from 52,011,005 barrels of 42 gallons in 1899 to 120,775,439 barrels in 1909, or 132.2 per cent, and the refined-oil products aggregated 40,290,985 barrels of 50 gallons in 1899, 46,454,062 barrels in 1904, and 89,082,810 barrels in 1909, an increase for the decade of 136.2 per cent.

| Table 77 | 1909 | 1904 | 1899 |
|--|----------------------|----------------------|----------------------|
| Crude petroleum used: | | | |
| Barrels (42 gallons)..... | 120,775,439 | 69,982,862 | 52,011,005 |
| Cost..... | \$162,307,040 | \$107,487,091 | \$80,424,207 |
| PRODUCTS.¹ | | | |
| Total value..... | \$236,997,659 | \$175,005,320 | \$123,929,384 |
| Oils: | | | |
| Illuminating— | | | |
| Barrels (50 gallons)..... | 33,495,798 | 27,135,094 | 25,171,289 |
| Value..... | \$94,547,010 | \$91,366,434 | \$74,694,297 |
| Fuel (including gas oils)— | | | |
| Barrels..... | 34,034,577 | 7,209,428 | 6,095,224 |
| Value..... | \$36,402,853 | \$9,208,391 | \$7,550,664 |
| Lubricating— | | | |
| Barrels..... | 10,745,885 | 6,298,251 | 3,408,918 |
| Value..... | \$38,884,236 | \$23,553,091 | \$10,897,214 |
| Naphtha and gasoline (including gas naphtha)— | | | |
| Barrels..... | 10,806,550 | 5,811,289 | 5,615,554 |
| Value..... | \$39,771,959 | \$21,314,837 | \$15,991,742 |
| Paraffin wax— | | | |
| Barrels..... | 946,830 | 794,068 | 774,924 |
| Value..... | \$9,388,812 | \$10,007,274 | \$7,791,149 |
| Oil asphaltum— | | | |
| Tons (2,000 pounds)..... | 233,328 | (²) | (²) |
| Value..... | \$2,724,752 | (²) | (²) |
| Residuum or tar— | | | |
| Barrels..... | 1,787,008 | 3,187,921 | 596,615 |
| Value..... | \$2,215,623 | \$3,138,361 | \$688,455 |
| Greases (lubricating, etc.)— | | | |
| Barrels..... | 138,302 | 202,439 | 572,140 |
| Value..... | \$1,567,647 | \$1,394,130 | \$2,454,617 |
| Coke and black naphtha— | | | |
| Value..... | \$507,695 | \$149,653 | \$176,281 |
| Sludge acid— | | | |
| Tons (2,000 pounds)..... | 133,215 | 165,104 | (²) |
| Value..... | \$402,295 | \$400,450 | (²) |
| All other products..... | \$10,524,747 | \$14,475,609 | \$3,684,965 |
| EQUIPMENT. | | | |
| Still, number..... | 2,395 | 1,907 | 1,774 |
| Heated by steam— | | | |
| Number..... | 451 | 282 | 290 |
| Capacity (barrels 42 gallons)..... | 424,564 | (²) | (²) |
| Heated by superheated steam— | | | |
| Number..... | 16 | 15 | 26 |
| Capacity (barrels 42 gallons)..... | 6,200 | (²) | (²) |
| Heated by fire— | | | |
| Number..... | 1,928 | 1,610 | 1,458 |
| Capacity (barrels 42 gallons)..... | 1,656,534 | (²) | (²) |
| Agitators, number..... | 529 | 374 | 327 |
| Chilling houses for paraffin, number..... | 79 | 67 | 48 |
| Hydraulic or other presses, number..... | 357 | 311 | 510 |
| Storage tanks for crude petroleum: | | | |
| Number..... | 678 | 304 | 257 |
| Capacity, gallons..... | 242,590,505 | 245,760,493 | (²) |
| Storage tanks for refined petroleum: | | | |
| Number..... | 6,476 | 3,575 | 2,869 |
| Capacity, gallons..... | 1,041,627,444 | 576,458,825 | (²) |
| Cooper shops, number..... | 53 | 64 | 48 |
| Tin shops, number..... | 14 | 17 | 13 |

¹ In 1909, 48,580 tons of sulphuric acid, and in 1904, 49,379 tons, were made and consumed in establishments where produced.

² Not reported separately.

³ Not reported.

The largest gain was that in the output of fuel oils, which increased from 7,209,428 barrels in 1904 to 34,034,577 barrels in 1909, as the result of the increase in the refining of low-grade crude oils. The output

of lubricating oils and naphtha also increased very rapidly. The decrease in the value of "all other products" in 1909 as compared with 1904 is due in part to the fact that the products of the box, cooperage, tinware, and paint shops operated by the refineries were included in 1904, but when possible separate reports were obtained for these departments in 1909 and the statistics for them were included with those for other industries at this census.

Salt.—The statistics for the salt industry are given in the following table.¹ The value of all products increased from \$7,966,897 in 1899 to \$11,327,834 in 1909, or 42.2 per cent. The production of salt increased from 15,187,819 barrels in 1899 to 29,933,060 barrels in 1909, or 97.1 per cent, while the value of the product increased from \$5,869,362 to \$8,311,729, or 41.6 per cent, the average value per barrel decreasing from 39 cents in 1899 to 28 cents in 1909 on account of the greatly increased proportion of the lower grades of salt manufactured. The barrel of 280 pounds is used in showing quantities.

| Table 78 | PRODUCT. | 1909 | 1904 | 1899 |
|---------------------------------------|---|---------------------|--------------------|--------------------|
| | Total value..... | \$11,327,834 | \$9,437,892 | \$7,966,897 |
| Salt: | | | | |
| Barrels..... | 29,933,060 | 17,128,572 | 15,187,819 | |
| Value..... | \$8,311,729 | \$6,955,734 | \$5,869,362 | |
| Bromine: | | | | |
| Pounds..... | 728,875 | 261,665 | 279,437 | |
| Value..... | \$62,735 | \$72,594 | \$64,921 | |
| All other products..... | \$2,923,370 | \$2,409,344 | \$2,092,614 | |
| | Salt, classified by grade (barrels). | | | |
| Table and dairy..... | 3,042,824 | 3,119,091 | 1,866,668 | |
| Common fine..... | 7,745,204 | 6,264,263 | 6,866,126 | |
| Common coarse..... | 2,843,363 | 1,878,666 | 2,635,262 | |
| Packers..... | 365,802 | 498,943 | 182,909 | |
| Coarse solar..... | 1,109,396 | 1,677,182 | 910,974 | |
| Rock salt, mined..... | 5,938,721 | 3,416,835 | 2,543,679 | |
| Milling, other grades, and brine..... | 8,867,729 | 293,562 | 182,770 | |
| | Process employed. | | | |
| Total number of establishments..... | 124 | 146 | 159 | |
| Number reporting: | | | | |
| Solar..... | 46 | 63 | (²) | |
| Kettle..... | 1 | 7 | (²) | |
| Grainer..... | 50 | 70 | (²) | |
| Open pan..... | 11 | 12 | (²) | |
| Vacuum pan..... | 21 | 20 | (²) | |

¹ In addition, 25,043 barrels of salt, to the value of \$8,415, were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² Includes potassium bromide.

³ Not reported.

Soap.—The statistics for the soap industry given in Table 79 for 1909 and 1904 include those for the soap factories operated by the owners of slaughtering and meat-packing establishments as well as for establishments engaged primarily in the manufacture of soap. In 1899 the manufacture of soap and of candles was reported as one industry, the value of products being \$53,231,017. In 1904 the value of the combined products of these industries was \$72,164,062 and in 1909, \$114,488,298.

The cost of the materials used in the soap industry was \$72,179,418 in 1909 and \$43,625,608 in 1904, the

¹ The statistics differ from those published by the United States Geological Survey, which include Hawaii and Porto Rico.

increase for the five-year period being 65.5 per cent. The value of all products was \$111,357,777 in 1909 and \$68,274,700 in 1904, the increase for the five-year period being 63.1 per cent. With the addition of the by-products from establishments in other industries the total value of soap products was \$115,455,172 in 1909. The chief soap product was hard soap, which, including that made in establishments engaged primarily in the manufacture of products other than soap, aggregated 883,583 net tons in 1909. Glycerin is an important product of the soap industry. Reference should be made to Table 66 for the glycerin product of chemical establishments.

| Table 79 | 1909 | 1904 |
|---------------------------------|----------------------------|---------------------------|
| MATERIALS. | | |
| Total cost..... | \$72,179,418 | \$43,625,608 |
| Tallow, grease, and other fats: | | |
| Pounds..... | 413,969,787 | 475,618,277 |
| Cost..... | \$23,341,905 | \$10,723,311 |
| Cocconut and palm-kernel oil: | | |
| Gallons..... | 11,856,837 | 6,833,132 |
| Cost..... | \$5,675,204 | \$2,692,034 |
| Cottonseed oil: | | |
| Gallons..... | 24,221,712 | 13,276,006 |
| Cost..... | \$9,718,988 | \$3,882,987 |
| Rosin: | | |
| Pounds..... | 207,296,447 | 168,107,246 |
| Cost..... | \$4,302,412 | \$2,734,848 |
| Feet: | | |
| Pounds..... | 94,050,892 | 59,761,740 |
| Cost..... | \$2,453,009 | \$1,222,082 |
| Caustic soda: | | |
| Tons (2,000 pounds)..... | 52,172 | 71,551 |
| Cost..... | \$2,212,232 | \$2,843,988 |
| Soda ash: | | |
| Tons (2,000 pounds)..... | 121,016 | 53,777 |
| Cost..... | \$2,281,787 | \$1,011,694 |
| All other materials..... | \$21,933,191 | \$9,513,704 |
| PRODUCTS. | | |
| Total value..... | ¹ \$111,357,777 | ¹ \$68,274,700 |
| Hard soap: | | |
| Pounds..... | 1,736,740,466 | 1,355,353,649 |
| Value..... | \$88,550,830 | \$50,878,480 |
| Soft soap: | | |
| Pounds..... | 44,052,615 | 33,613,416 |
| Value..... | \$943,676 | \$987,064 |
| Glycerin: | | |
| Pounds..... | ² 39,689,300 | 27,060,661 |
| Value..... | \$5,713,558 | \$2,958,115 |
| Special soap articles..... | \$731,823 | \$554,881 |
| All other products..... | \$15,417,890 | \$7,216,154 |

¹ In addition, the following products were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation:

| | 1909 | 1904 |
|-------------------------|------------------------|-------------|
| Soap: | | |
| Hard— | | |
| Pounds..... | 30,424,855 | 31,251,795 |
| Value..... | \$1,279,004 | \$1,148,020 |
| Soft— | | |
| Pounds..... | 15,984,055 | 10,285,830 |
| Value..... | \$325,511 | \$94,017 |
| Glycerin: | | |
| Pounds..... | ³ 7,206,721 | 565,000 |
| Value..... | \$1,076,706 | \$45,200 |
| All other products..... | \$1,416,174 | \$148,981 |

² In addition, 5,597,519 pounds were reported with no value.

³ In addition, 25,319 pounds were reported with no value.

NOTE.—The following products were made and consumed in establishments where produced:

| | 1909 | 1904 |
|--------------------------------------|-------------|-------------|
| Red oil.....gallons.. | 3,175,795 | 1,140,346 |
| Tallow.....pounds.. | 17,709,210 | 10,613,271 |
| Cottonseed oil.....gallons.. | 2,422,843 | 920,410 |
| Caustic lye, 30° Baumé.....gallons.. | 15,931,030 | 9,568,522 |
| Sodium silicate.....pounds.. | 37,460,246 | 1,597,886 |
| Glycerin.....pounds.. | 6,816,279 | 3,433,359 |
| Framed soap.....pounds.. | 527,370,128 | 114,462,424 |

Sulphuric, nitric, and mixed acids.—Comparative statistics for the products of establishments engaged primarily in the manufacture of sulphuric, nitric, and mixed acids are given in the following table. The total value of products was \$9,884,057 in 1909, as compared with \$8,596,390 in 1899, an increase of 15 per cent. This increase was chiefly in sulphuric acid, the output of which increased in quantity (on the basis of 50° acid) 88.8 per cent and in value 38.3 per cent. The ton of 2,000 pounds is used in showing quantities.

| Table 80 | PRODUCT. | 1909 | 1904 | 1899 |
|---------------------------------|----------------------|--------------------------|--------------------------|-------------|
| Total value..... | | ¹ \$9,884,057 | ¹ \$9,052,646 | \$8,596,390 |
| Acids..... | | \$7,567,274 | \$6,055,078 | \$3,209,872 |
| Sulphuric: | | | | |
| Tons, reduced to 50° Baumé..... | 855,191 | 467,614 | 452,942 | |
| Tons..... | 703,185 | 364,374 | 324,365 | |
| Value..... | \$5,629,496 | \$4,286,312 | \$4,071,848 | |
| 60° Baumé— | | | | |
| Tons..... | 207,476 | 199,663 | 250,328 | |
| Value..... | \$3,158,097 | \$2,886,179 | \$3,244,586 | |
| 60° Baumé— | | | | |
| Tons..... | 73,073 | 13,034 | 13,650 | |
| Value..... | \$401,734 | \$121,432 | \$199,380 | |
| 50° Baumé— | | | | |
| Tons..... | ² 362,636 | ³ 151,077 | 60,387 | |
| Value..... | \$2,069,665 | \$1,278,701 | \$627,882 | |
| Nitric: | | | | |
| Pounds..... | 8,396,326 | 30,306,555 | 20,402,570 | |
| Value..... | \$499,308 | \$1,446,471 | \$1,028,266 | |
| Mixed: | | | | |
| Pounds..... | 45,861,626 | 42,812,894 | 42,301,319 | |
| Value..... | \$1,438,475 | \$1,222,295 | \$1,109,758 | |
| All other products..... | | \$2,310,783 | \$2,097,568 | \$2,386,518 |

¹ In addition, the following products were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation:

| | 1909 | 1904 |
|-------------------------|-------------|-------------|
| Acids: | | |
| Sulphuric (50°)— | | |
| Tons..... | 621,801 | 433,377 |
| Value..... | \$4,455,293 | \$3,655,899 |
| Nitric— | | |
| Pounds..... | 18,929,620 | 15,957,526 |
| Value..... | \$857,795 | \$894,473 |
| Mixed— | | |
| Pounds..... | 11,820,542 | 22,518,433 |
| Value..... | \$422,312 | \$735,061 |
| All other products..... | \$511,532 | ..... |

² Includes the equivalent of 27,602 tons of oleum.

³ Includes the equivalent of 13,268 tons of oleum.

NOTE.—In 1909, 1,271,535 tons of sulphuric acid (50°) and 110,700,619 pounds of nitric acid, and in 1904, 968,455 tons of sulphuric acid (50°) and 62,116,366 pounds of nitric acid were made and consumed in establishments where produced.

Including by-products from establishments engaged primarily in the manufacture of products other than those covered by the industry designation, the total production of these acids for sale in 1909 and 1904 was as follows:

| Table 81 | KIND. | 1909 | 1904 |
|-----------------------|--------------|-------------|------|
| Sulphuric acid (50°): | | | |
| Tons..... | 1,476,992 | 900,991 | |
| Value..... | \$10,084,759 | \$7,942,211 | |
| Nitric acid: | | | |
| Pounds..... | 27,325,940 | 46,264,081 | |
| Value..... | \$1,357,098 | \$2,250,944 | |
| Mixed acids: | | | |
| Pounds..... | 57,182,168 | 65,331,327 | |
| Value..... | \$1,860,787 | \$1,957,356 | |

A large amount of sulphuric acid made and consumed in the establishments where manufactured, particularly in fertilizer factories, must be taken into

account in considering the total production. The following table gives the total production for the three census years:

| Table 82 | SULPHURIC ACID. | 1909 | 1904 | 1899 |
|---|-----------------|-----------|-----------|-----------|
| Total, reduced to 50° Baumé acid.....tons.. | | 2,748,527 | 1,869,437 | 1,548,123 |
| For sale..... | | 1,476,992 | 900,992 | 783,768 |
| For consumption..... | | 1,271,535 | 968,445 | 764,355 |

Turpentine and rosin.—The products of the turpentine and rosin industry for which statistics are presented in the following table increased in value from \$20,344,888 in 1899 to \$25,295,017 in 1909, or 24.3 per cent, but the gain was due wholly to the great increase in the price of rosin. The turpentine product decreased in both quantity and value during the decade. The output of rosin also decreased 24.9 per cent, but its value increased 145.2 per cent. The average value of rosin per barrel increased from \$1.18 in 1899 to \$3.85 in 1909.

| Table 83 | PRODUCT. | 1909 | 1904 | 1899 |
|-------------------------------|----------|--------------|--------------|--------------|
| Total value..... | | \$25,295,017 | \$23,937,024 | \$20,344,888 |
| Turpentine: | | | | |
| Gallons..... | | 28,988,954 | 30,687,051 | 38,488,170 |
| Value..... | | \$12,654,228 | \$15,170,499 | \$14,900,235 |
| Rosin: | | | | |
| Barrels (280 pounds)..... | | 3,263,857 | 3,508,247 | 4,348,094 |
| Value..... | | \$12,576,721 | \$8,725,619 | \$5,129,268 |
| Dross and other products..... | | \$64,068 | \$40,906 | \$255,885 |

¹ In addition, 682,702 gallons of turpentine, valued at \$243,491, was produced by wood distillation.

CLAY, GLASS, AND STONE PRODUCTS.

Under this general head are assembled the industries using clay, sand, and stone as basic materials, namely, the manufacture of brick, tile, pottery, terra-cotta, and fire-clay products, and that of cement, glass, and lime.

The statistics for all these industries, except glass manufacture, were collected in 1909 in cooperation with the United States Geological Survey, and the tables include, except as otherwise stated, the respective products made by establishments engaged primarily in the manufacture of other products as well as those establishments making such products as their principal business.

Brick and tile, and pottery, terra-cotta, and fire-clay products.¹—Table 84 summarizes the statistics in regard to the products of the brick and tile, pottery, and terra-cotta and fire-clay products industries. The total value of these classes of products was \$168,895,365 in 1909 and \$95,533,862 in 1899, the increase during the decade being 76.8 per cent. Of the total value of products in 1909, that of brick formed 57.5 per cent, that of tile and allied products 23.2 per cent, and that of pottery 18.4 per cent. The percentages were practically the same in 1904 and 1899. Some of the classes show large ratios of in-

crease, notably porcelain electrical supplies and building terra cotta, including architectural terra cotta, fireproofing, and tiling.

| Table 84 | PRODUCT. | 1909 | 1904 | 1899 |
|---|----------|---------------|------------------|------------------|
| Total value..... | | \$168,895,365 | \$135,352,854 | \$95,533,862 |
| Brick and tile, terra-cotta, and fire-clay products..... | | \$136,387,846 | \$109,008,306 | \$76,551,645 |
| Brick..... | | \$97,137,844 | \$78,728,083 | \$58,640,228 |
| Common— | | | | |
| Thousands..... | | 9,787,671 | 8,683,897 | 7,654,528 |
| Value..... | | \$57,216,789 | \$51,299,871 | \$39,674,749 |
| Fire— | | | | |
| Thousands..... | | 838,167 | 678,362 | 800,862 |
| Value..... | | \$16,620,695 | \$11,732,625 | \$8,636,562 |
| Vitrified, paving, etc.— | | | | |
| Thousands..... | | 1,023,654 | 715,559 | 590,720 |
| Value..... | | \$11,269,586 | \$7,256,088 | \$4,828,456 |
| Front, including fancy colored and fancy or ornamental— | | | | |
| Thousands..... | | 821,641 | 626,142 | 451,426 |
| Value..... | | \$9,836,252 | \$7,335,511 | \$5,179,492 |
| Sand lime..... | | \$1,150,590 | \$398,003 | (¹) |
| Enameled..... | | \$933,302 | \$445,585 | \$329,969 |
| Drain tile..... | | \$9,736,978 | \$5,522,198 | \$3,662,184 |
| Sewer pipe..... | | \$10,322,324 | \$8,416,909 | \$4,560,334 |
| Architectural terra cotta..... | | \$6,251,625 | \$3,792,763 | \$2,027,582 |
| Fireproofing, terra-cotta lumber and hollow building tile, or blocks..... | | \$4,466,706 | \$4,317,312 | \$1,665,031 |
| Tile, not drain..... | | \$5,291,963 | \$2,725,717 | \$1,276,300 |
| Stove lining..... | | \$2,583,583 | (¹) | \$416,235 |
| Other..... | | \$2,694,821 | \$6,591,224 | \$4,303,891 |
| Pottery..... | | \$31,048,341 | \$25,834,513 | \$17,222,040 |
| White ware, including C. C. ware, white granite, semiporcelain ware, and semivitreous porcelain ware..... | | \$13,728,316 | \$9,195,703 | \$6,376,351 |
| Sanitary ware..... | | \$5,999,296 | \$3,922,506 | \$2,211,877 |
| Stoneware and yellow and Rockingham ware..... | | \$3,993,859 | \$3,461,521 | \$2,130,268 |
| Porcelain electrical supplies..... | | \$3,047,499 | \$1,500,283 | \$470,355 |
| China, bone china, Delft and Bel-leek ware..... | | \$1,766,766 | \$3,478,627 | \$1,297,978 |
| Red earthenware..... | | \$804,606 | \$821,695 | \$762,260 |
| Other..... | | \$1,717,800 | \$3,424,178 | \$3,972,956 |
| All other products..... | | \$1,459,178 | \$515,095 | \$1,790,177 |

¹ Not reported separately.

² Product of Ohio included in "other" pottery.

Cement.—The statistics of products for the cement industry for 1909 and 1904, given in the following table, show a total value of \$63,205,455 in 1909 as compared with \$29,873,122 in 1904, the rate of increase for the five-year period being 111.6 per cent. In 1899 the statistics for the lime and cement industries were combined, the products aggregating \$28,673,735 in value. The value of the combined lime and cement product in 1909 was \$81,157,442, the increase for the decade being 183 per cent.

During the period 1904–1909 the output of cement increased 110.5 per cent in quantity, all of the increase being in Portland cement, while the output of natural cement and of puzzolan cement decreased greatly. Portland cement formed 97.5 per cent of the total in 1909, as compared with 83.7 per cent in 1904.

| Table 85 | PRODUCT. | 1909 | 1904 |
|-------------------------|----------|--------------|--------------|
| Total value..... | | \$63,205,455 | \$29,873,122 |
| Cement: | | | |
| Barrels..... | | 66,689,715 | 31,675,267 |
| Value..... | | \$53,610,563 | \$28,081,920 |
| Portland— | | | |
| Barrels..... | | 64,991,431 | 26,505,861 |
| Value..... | | \$52,858,354 | \$23,355,119 |
| Natural— | | | |
| Barrels..... | | 1,537,638 | 4,866,331 |
| Value..... | | \$862,755 | \$2,430,150 |
| Puzzolan— | | | |
| Barrels..... | | 140,646 | 303,045 |
| Value..... | | \$99,453 | \$226,651 |
| All other products..... | | \$9,594,892 | \$3,541,202 |

¹ The statistics differ from those published by the United States Geological Survey, which include Porto Rico.

Glass.—The following table presents comparative statistics for the glass industry, giving the total cost of materials and the total value of products, together with the quantities of the principal materials and products, for the years 1909, 1904, and 1899. There was an increase of 62.9 per cent in the value of all

products for 1909 as compared with 1899. The increase in the value of building glass amounted to 53.9 per cent; that in the value of pressed and blown glass to 60.4 per cent; and that in the value of bottles and jars to 66.2 per cent. The *ton of 2,000 pounds* is used in showing quantities.

| Table 86 | 1909 | 1904 | 1899 | | 1909 | 1904 | 1899 |
|---|--------------|--------------|--------------|--|--------------|--------------|------------------|
| PRINCIPAL MATERIALS. | | | | PRODUCTS—continued. | | | |
| Total cost..... | \$32,119,499 | \$26,145,522 | \$16,731,009 | Building glass—Continued. | | | |
| Glass sand, tons..... | 1,004,086 | 760,792 | 581,720 | Skylight— | | | |
| Soda ash (carbonate of soda), tons..... | 373,764 | 215,402 | 157,779 | Square feet..... | 15,400,066 | 15,255,541 | 3,679,694 |
| Salt cake (sulphate of soda), tons..... | 76,540 | 53,965 | 53,257 | Value..... | \$788,726 | \$678,391 | \$165,086 |
| Nitrate of soda, tons..... | 19,676 | 11,915 | 10,770 | All other..... | \$904,599 | \$1,133,214 | \$250,056 |
| Limestone, tons..... | 150,377 | 115,655 | 91,015 | Pressed and blown glass..... | \$27,398,445 | \$21,956,158 | \$17,076,125 |
| Lime, bushels..... | 1,250,117 | 1,166,342 | 963,349 | Tableware, 100 pieces..... | 1,286,056 | 1,283,974 | 655,141 |
| Arsenic, pounds..... | 3,140,720 | 2,676,650 | 2,349,261 | Jellies, tumblers, and goblets, dozen..... | 11,687,036 | 7,346,214 | 8,544,050 |
| Carbon, tons..... | 5,480 | 3,750 | 4,155 | Lamps, dozen..... | 322,482 | 437,017 | 807,765 |
| Manganese, pounds..... | 3,882,465 | 3,096,939 | 1,493,538 | Chimneys, dozen..... | 6,652,667 | 7,039,766 | 6,901,192 |
| Litharge and red lead, pounds..... | 11,653,149 | 9,613,649 | 8,386,106 | Lantern globes, dozen..... | 952,620 | 1,705,247 | 1,944,816 |
| Potash or pearlash, pounds..... | 6,938,355 | 5,446,338 | 4,406,211 | Globes and other electrical goods, dozen..... | 11,738,798 | 1,901,415 | (^c) |
| Grinding sand, tons..... | 706,689 | 410,856 | 265,438 | Shades, globes, and other gas goods, dozen..... | 1,541,440 | 878,244 | 2,673,854 |
| Rouge, pounds..... | 1,383,182 | 1,098,566 | 837,536 | Blown tumblers, stem ware, and bar goods, dozen..... | 9,182,000 | 6,282,606 | 6,127,367 |
| PRODUCTS. | | | | Opal ware, dozen..... | 3,095,696 | 1,091,208 | 3,750,443 |
| Total value..... | \$92,095,203 | \$79,607,998 | \$56,539,712 | Cut ware, dozen..... | 206,336 | 83,736 | 134,726 |
| Building glass..... | \$26,308,438 | \$21,697,861 | \$17,096,234 | Bottles and jars..... | \$36,018,333 | \$33,631,063 | \$21,676,791 |
| Window— | | | | Prescriptions, vials, and druggists' wares, gross..... | 3,624,022 | 3,202,586 | 2,423,932 |
| 50-foot boxes..... | 6,921,611 | 4,852,315 | 4,341,282 | Beer, soda, and mineral, gross..... | 2,345,204 | 2,351,852 | 1,351,118 |
| Value..... | \$11,742,959 | \$11,610,861 | \$10,879,355 | Liquors and flasks, gross..... | 1,887,344 | 2,157,801 | 985,374 |
| Plate— | | | | Milk jars, gross..... | 440,302 | 253,661 | 140,142 |
| Total cast, square feet..... | 60,105,694 | 34,804,986 | 21,172,129 | Fruit jars, gross..... | 1,124,485 | 1,061,829 | 789,298 |
| Polished— | | | | Battery jars and other electrical goods, gross..... | 9,981 | 10,974 | (^c) |
| Square feet..... | 47,370,254 | 27,293,138 | 16,883,578 | Patent and proprietary, gross..... | 1,637,798 | 1,657,372 | 1,296,131 |
| Value..... | \$12,204,875 | \$7,978,253 | \$5,158,598 | Packers and preservers, gross..... | 1,237,175 | 1,237,005 | 784,688 |
| Rough, made for sale— | | | | Demijohns and carboys, dozen..... | 122,570 | 64,450 | 83,243 |
| Square feet..... | 205,690 | 17,784 | 628,684 | All other products..... | \$2,360,987 | \$2,322,916 | \$690,562 |
| Value..... | \$37,431 | \$3,529 | \$75,887 | | | | |
| Cathedral— | | | | | | | |
| Square feet..... | 7,405,980 | 6,615,093 | 8,845,361 | | | | |
| Value..... | \$569,848 | \$293,623 | \$507,252 | | | | |

¹ In addition, 42,639 gross of bottles and jars, valued at \$90,490, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² In addition, glassware to the value of \$9,663 was made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

³ Not reported.

Lime.¹—The total value of the lime reported as manufactured in 1909 was \$13,763,604 as compared with \$9,951,456 in 1904, an increase for the five-year period of 38.3 per cent. The quantity reported in 1909 was 3,467,523 tons (2,000 pounds), of which 1,904,202 tons was used for building or structural purposes; 591,792 tons for fertilizing; and the remainder in various manufacturing establishments, such as paper mills, tanneries, sugar factories, and alkali works. The value of all products reported by establishments engaged primarily in the manufacture of lime was \$17,951,987 in 1909 and \$14,751,170 in 1904.

VEHICLES FOR LAND TRANSPORTATION.

Under the above heading are given statistics for the manufacture of automobiles, bicycles, motorcycles, and carriages and wagons, and the construction of steam and electric railroad cars, and also for the operations of the construction and repair shops of railroads.

Automobiles.—The statistics for automobiles are presented in Table 87. Under "all other products" are included the products of establishments engaged

in the manufacture of automobile bodies and parts, which are sold largely to automobile manufacturers, as well as the value of bodies and parts made and sold separately by automobile manufacturers. The total value of products for the industry thus involves considerable duplication. The growth of the automobile industry has been phenomenal. In 1899 the general statistics for the industry were included with those for carriage and wagon manufacture, and only 3,897 automobiles were reported. In 1904 the total number, including automobiles made by concerns classified under other industries, was 22,830, while in 1909 the number was 127,287, or nearly thirty-three times the number reported in 1899.

The value of all products of the industry proper was \$249,202,075 in 1909 and \$30,033,536 in 1904. Gasoline machines formed 95.1 per cent of the total number made in 1909 and 86.2 per cent in 1904. Of the total number manufactured in 1909, 3,226, or 2.5 per cent, were rated at 50 horsepower or more; 51,218, or 40.5 per cent, at from 30 to 49 horsepower; 35,257, or 27.8 per cent, at from 20 to 29 horsepower; 29,353, or 23.2 per cent, at from 10 to 19 horsepower; and 7,539, or 6 per cent, at less than 10 horsepower. Passenger vehicles constituted 97.4 per cent of the total number and business vehicles 2.6 per cent.

¹ The statistics differ from those published by the United States Geological Survey, which include Hawaii and Porto Rico.

Table 87

| PRODUCT. | 1909 | | 1904 | |
|--|---------|---------------|------------------|--------------|
| | Number. | Value. | Number. | Value. |
| Total value..... | | \$249,202,075 | | \$30,033,536 |
| Automobiles..... | 120,593 | 164,269,324 | 21,002 | 23,751,234 |
| Gasoline..... | 120,393 | 153,529,653 | 18,699 | 19,569,941 |
| Electric..... | 3,826 | 7,259,430 | 1,425 | 2,496,255 |
| Steam..... | 2,374 | 3,480,241 | 1,568 | 1,688,038 |
| Passenger vehicles (pleasure, family, and public conveyances)..... | 123,338 | 159,039,301 | 21,281 | 22,894,287 |
| Gasoline..... | 117,633 | 149,530,232 | 18,504 | 19,300,654 |
| Electric..... | 3,331 | 6,028,828 | 1,211 | 1,819,595 |
| Steam..... | 2,374 | 3,480,241 | 1,566 | 1,684,038 |
| Buggies..... | 4,582 | 2,391,250 | (²) | |
| Gasoline..... | 4,314 | 2,039,129 | (²) | |
| Electric..... | 268 | 352,121 | (²) | |
| Runabouts..... | 36,204 | 28,030,479 | 12,131 | 8,831,504 |
| Gasoline..... | 35,347 | 27,116,901 | 10,999 | 7,976,821 |
| Electric..... | 496 | 648,030 | 455 | 453,304 |
| Steam..... | 361 | 284,948 | 677 | 491,379 |
| Touring cars..... | 70,114 | 113,403,188 | 7,220 | 11,781,521 |
| Gasoline..... | 73,883 | 109,844,295 | 6,444 | 10,576,023 |
| Electric..... | 243 | 387,526 | 39 | 55,038 |
| Steam..... | 1,958 | 3,171,367 | 737 | 1,150,460 |
| Closed (limousine, cabs, etc.)..... | 5,205 | 12,729,304 | (²) | |
| Gasoline..... | 3,290 | 8,762,768 | (²) | |
| Electric..... | 1,915 | 3,966,536 | (²) | |
| All other (omnibuses, sight-seeing wagons, ambulances, patrol wagons, etc.)..... | 1,233 | 2,485,080 | 1,930 | 2,191,262 |
| Gasoline..... | 799 | 1,767,139 | 1,061 | 747,810 |
| Electric..... | 409 | 674,015 | 717 | 1,311,253 |
| Steam..... | 25 | 43,926 | 152 | 132,199 |
| Business vehicles (merchandise)..... | 3,255 | 5,230,023 | 411 | 946,947 |
| Gasoline..... | 2,760 | 3,999,421 | 195 | 266,287 |
| Electric..... | 495 | 1,230,602 | 214 | 676,660 |
| Steam..... | | | 2 | 4,000 |
| Delivery wagons..... | 1,862 | 1,918,856 | 251 | 455,457 |
| Gasoline..... | 1,645 | 1,474,063 | 140 | 215,897 |
| Electric..... | 217 | 444,793 | 109 | 235,560 |
| Steam..... | | | 2 | 4,000 |
| Trucks..... | 1,366 | 3,165,512 | 160 | 491,490 |
| Gasoline..... | 1,090 | 2,384,703 | 55 | 50,390 |
| Electric..... | 276 | 780,809 | 105 | 441,100 |
| All other..... | 27 | 145,655 | (²) | |
| Gasoline..... | 25 | 140,655 | (²) | |
| Electric..... | 2 | 5,000 | (²) | |
| All other products, including bodies and parts..... | | \$78,587,753 | | 5,431,249 |
| Amount received for custom work and repairing..... | | 6,317,998 | | 851,053 |

¹ In addition, 694 automobiles, valued at \$830,080, and bodies and parts valued at \$4,416,266, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² In addition, 1,138 automobiles, valued at \$879,203, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

³ Not reported separately.

⁴ None reported.

⁵ Includes custom work and repairing by establishments manufacturing bodies and parts.

Bicycles and motorcycles, and parts.—The following table presents the comparative statistics of products for the bicycle and motorcycle industry. It does not include children's bicycles and tricycles. A marked feature is the decline in the manufacture of bicycles and tricycles and the increase in the manufacture of motorcycles.

| Table 88 | PRODUCT. | 1909 | 1904 | 1899 |
|----------|--|------------------|-------------|--------------|
| | Total value..... | \$10,698,567 | \$5,153,240 | \$31,915,908 |
| | Bicycles: | | | |
| | Number..... | 168,824 | 225,309 | 1,112,880 |
| | Value..... | \$2,436,996 | \$3,203,505 | \$22,127,310 |
| | Tricycles: | | | |
| | Number..... | (²) | 32 | 328 |
| | Value..... | | \$3,350 | \$17,261 |
| | Motorcycles: | | | |
| | Number..... | 18,628 | 2,300 | 160 |
| | Value..... | \$3,015,988 | \$354,980 | \$23,074 |
| | All other products, including parts..... | \$5,245,563 | \$1,591,405 | \$9,737,603 |

¹ In addition, the following products were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation: In 1909, 64,833 bicycles, valued at \$791,183, and other products, including parts, etc., valued at \$579,927; in 1904, 25,178 bicycles, valued at \$537,418; 28 motorcycles, valued at \$4,200; and other products, including parts, valued at \$34,341; and in 1899, 69,811 bicycles, valued at \$1,529,177, and other products valued at \$24,000.

² None reported.

The total value of products of the industry decreased from \$31,915,908 in 1899 to \$5,153,240 in 1904, but by 1909 it had risen again to \$10,698,567, or more than double the figures for 1904.

Carriages and wagons and materials.—The following table presents statistics for the manufacture of carriages and wagons, including under "All other products" the products of establishments engaged in the manufacture of carriage and wagon materials, but not including children's carriages and sleds. The total value of products increased from \$138,261,763 in 1899 to \$159,892,547 in 1909, or 15.6 per cent. The value of wagons increased \$8,852,172, or 28.5 per cent, though the number manufactured was very little larger in 1909 than in 1899. The carriages reported were both fewer in number and lower in value in 1909 than in 1899. Public conveyances also show a decrease in value, but a slight increase in number. In each of these three classes the decreases that appear for the decade as a whole have taken place entirely since 1904, in which year the numbers and values reported exceeded those for 1899. The decreases are presumably due to the growth of the automobile industry.

| Table 89 | PRODUCTS. | 1909 | 1904 | 1899 |
|----------|--|---------------|------------------|------------------|
| | Total value..... | \$159,892,547 | \$155,893,849 | \$138,261,763 |
| | Carriages (family and pleasure): | | | |
| | Number..... | 825,411 | 937,499 | 964,639 |
| | Value..... | \$47,756,118 | \$55,739,276 | \$51,295,296 |
| | Wagons: | | | |
| | Number..... | 587,685 | 643,755 | 570,425 |
| | Value..... | \$39,932,910 | \$37,195,236 | \$31,060,738 |
| | Business— | | | |
| | Number..... | 154,631 | 133,422 | (²) |
| | Value..... | \$16,440,816 | (²) | (²) |
| | Farm— | | | |
| | Number..... | 429,952 | 505,025 | (²) |
| | Value..... | \$22,613,875 | (²) | (²) |
| | Government municipal, etc.— | | | |
| | Number..... | 3,102 | 5,308 | (²) |
| | Value..... | \$876,219 | (²) | (²) |
| | Public conveyances (cabs, hacks, hansoms, hotel coaches, omnibuses, etc.): | | | |
| | Number..... | 2,243 | 2,711 | 2,238 |
| | Value..... | \$939,267 | \$1,314,952 | \$1,114,090 |
| | Sleighs and sleds: | | | |
| | Number..... | 100,899 | 127,455 | 117,006 |
| | Value..... | \$2,065,850 | \$2,694,560 | \$2,290,903 |
| | Automobiles: ⁴ | | | |
| | Number..... | 544 | 199 | 174 |
| | Value..... | \$569,119 | \$235,675 | \$129,053 |
| | All other products, including parts, and amount received for repair work. | \$68,629,293 | \$58,678,156 | \$52,351,596 |

¹ In addition, 14,908 carriages, valued at \$1,078,035; 42,112 wagons, valued at \$2,093,288; 104 public conveyances, valued at \$5,415; 5,209 sleighs and sleds, valued at \$165,917; and parts and materials, valued at \$1,184,254, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² In addition, carriages and wagons, valued at \$912,173, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

³ Not reported separately.

⁴ Automobiles manufactured in establishments devoted primarily to the manufacture of carriages and wagons.

Cars and general shop construction and repairs by steam-railroad companies.—Table 90 presents statistics of the work done by construction and repair shops operated by steam-railroad companies, not including roundhouses where running repairs are made. The total value of such work was \$405,600,727 in 1909 and \$218,238,277 in 1899, the rate of increase

for the decade being 85.9 per cent. Most of the value represents that of repairs, comparatively little representing new construction.

| Table 90 | CLASS OF WORK. | 1909 | 1904 | 1899 ¹ |
|----------|--|---------------|---------------|-------------------|
| | Total value | \$405,600,727 | \$309,775,089 | \$218,238,277 |
| | Motive power and machinery department..... | \$184,971,870 | \$149,043,953 | \$94,447,260 |
| | Locomotives built: | | | |
| | Number..... | 215 | 148 | 272 |
| | Value..... | \$3,289,140 | \$1,853,939 | \$3,276,393 |
| | Repairs to locomotives, motors, etc..... | \$127,928,773 | \$101,326,805 | \$57,383,143 |
| | Work for other corporations..... | \$4,735,004 | \$5,681,307 | \$3,338,589 |
| | All other products or work..... | \$49,018,953 | \$40,781,902 | \$30,449,135 |
| | Car department..... | \$190,768,939 | \$149,748,820 | \$118,376,552 |
| | Cars built..... | \$13,326,171 | \$12,990,011 | \$16,521,352 |
| | Passenger— | | | |
| | Number..... | 218 | 414 | 300 |
| | Value..... | \$1,291,354 | \$2,337,977 | \$1,441,733 |
| | Freight— | | | |
| | Number..... | 13,972 | 14,742 | 26,543 |
| | Value..... | \$11,767,604 | \$10,006,642 | \$15,079,619 |
| | Other— | | | |
| | Number..... | 359 | 2,000 | (²) |
| | Value..... | \$207,153 | \$645,392 | (²) |
| | Repairs to cars of all kinds..... | \$147,194,065 | \$105,319,032 | \$74,605,500 |
| | Work for other corporations..... | \$3,784,239 | \$6,946,990 | \$7,084,857 |
| | All other products or work..... | \$30,464,464 | \$24,492,787 | \$20,104,843 |
| | Bridge and building departments (shopwork)..... | \$2,799,898 | \$5,090,141 | \$5,414,465 |
| | Repairs and renewals..... | \$1,908,737 | \$4,351,487 | \$3,937,170 |
| | Work for other corporations..... | \$46,496 | \$40,581 | \$241,626 |
| | All other products or work..... | \$846,665 | \$704,073 | \$1,235,609 |
| | All other products and work, not classified..... | \$18,060,020 | \$5,286,175 | (²) |

¹ Includes Alaska.

² None reported.

Cars and general shop construction and repairs by street-railroad companies.—The following table presents statistics of the operations of the construction and repair shops of street-railroad companies, including all electric systems and interurban electric lines—all railroads, in fact, except steam roads. The work done, which consists almost wholly of repairs, was not reported in detail in 1899, but its aggregate value in that year was \$9,370,811, as compared with \$13,437,121 in 1904 and \$31,962,561 in 1909, an increase for the decade of 241.1 per cent.

| Table 91 | CLASS OF WORK. | 1909 | 1904 |
|----------|---|--------------|--------------|
| | Total value | \$31,962,561 | \$13,437,121 |
| | Motive power and machinery department..... | \$4,510,332 | \$510,046 |
| | Repairs to motors, etc..... | \$4,004,336 | — |
| | Work for other corporations..... | \$88,070 | \$2,026 |
| | All other products or work..... | \$147,926 | \$508,320 |
| | Car department..... | \$25,335,403 | \$12,581,365 |
| | Cars built..... | \$626,752 | \$805,144 |
| | Passenger— | | |
| | Number..... | 120 | 288 |
| | Value..... | \$498,709 | \$580,669 |
| | Freight— | | |
| | Number..... | 63 | 13 |
| | Value..... | \$59,102 | \$11,360 |
| | Other— | | |
| | Number..... | 51 | 9 |
| | Value..... | \$68,941 | \$13,109 |
| | Repairs to cars of all kinds..... | \$22,809,777 | \$11,254,505 |
| | Work for other corporations..... | \$824,805 | \$36,714 |
| | All other products or work..... | \$1,714,129 | \$685,002 |
| | Bridge and building department (shopwork)..... | \$330,948 | \$327,855 |
| | Repairs and renewals..... | \$273,581 | \$253,133 |
| | Work for other corporations..... | \$5,093 | — |
| | All other products or work..... | \$52,274 | \$74,722 |
| | All other products and work not classified..... | \$1,285,818 | \$16,955 |

¹ Includes value of three electric locomotives.

Cars, steam-railroad.—The statistics of establishments constructing steam-railroad cars given in the

following table do not include the work of steam-railroad companies in their repair shops or that of concerns primarily engaged in the construction of street cars. The total value of products of this industry was \$123,729,627 in 1909, as compared with \$90,510,180 in 1899, an increase for the decade of 36.7 per cent. The freight cars made in 1909 were fewer in number and lower in aggregate value than those made in either 1904 or 1899, and the cars for passenger service made in 1909 were fewer in number and lower in aggregate value than those made in 1904. In fact, while there are a number of classes of products, such as passenger cars (day coaches) and ore cars, which show an increase in number and value for the five-year period 1904–1909, the increase in value for the total is more than covered by the increase in the value of “all other products.”

| Table 92 | PRODUCT. | 1909 | 1904 | 1899 |
|----------|--|---------------|---------------|--------------|
| | Total value | \$123,729,627 | \$111,175,310 | \$90,510,180 |
| | Steam-railroad cars: | | | |
| | Passenger service— | | | |
| | Total number..... | 1,601 | 2,030 | 979 |
| | Value..... | \$13,829,607 | \$18,140,293 | \$7,368,299 |
| | Baggage and express— | | | |
| | Number..... | 216 | 199 | 72 |
| | Value..... | \$1,105,770 | \$890,185 | \$238,554 |
| | Mail— | | | |
| | Number..... | 95 | 95 | 42 |
| | Value..... | \$600,012 | \$576,230 | \$197,465 |
| | Passenger— | | | |
| | Number..... | 957 | 428 | 331 |
| | Value..... | \$7,209,425 | \$2,955,517 | \$1,975,469 |
| | Chair, dining and buffet, parlor, sleeping, and all other— | | | |
| | Number..... | 333 | 1,308 | 534 |
| | Value..... | \$4,013,401 | \$13,712,361 | \$4,956,811 |
| | Freight service— | | | |
| | Total number..... | 73,177 | 100,616 | 116,590 |
| | Value..... | \$61,691,825 | \$69,148,955 | \$62,161,013 |
| | Box— | | | |
| | Number..... | 29,728 | 38,184 | 47,838 |
| | Value..... | \$23,982,446 | \$28,508,632 | \$26,562,893 |
| | Coal and coke— | | | |
| | Number..... | 11,473 | 27,998 | 28,857 |
| | Value..... | \$9,419,655 | \$21,307,218 | \$18,414,718 |
| | Flat— | | | |
| | Number..... | 3,232 | 5,412 | 4,525 |
| | Value..... | \$2,033,801 | \$2,893,154 | \$1,923,525 |
| | Fruit— | | | |
| | Number..... | 900 | 2,840 | 1,620 |
| | Value..... | \$784,470 | \$1,727,771 | \$665,354 |
| | Furniture— | | | |
| | Number..... | 90 | 801 | 1,717 |
| | Value..... | \$70,515 | \$505,000 | \$1,145,265 |
| | Gondola or ore— | | | |
| | Number..... | 19,607 | 9,518 | 11,821 |
| | Value..... | \$18,128,180 | \$5,518,084 | \$6,873,145 |
| | Refrigerator— | | | |
| | Number..... | 2,618 | 3,353 | 2,354 |
| | Value..... | \$2,747,057 | \$3,042,835 | \$1,956,097 |
| | Stock— | | | |
| | Number..... | 2,349 | 4,235 | 2,760 |
| | Value..... | \$1,586,008 | \$2,453,123 | \$1,426,800 |
| | Caboose— | | | |
| | Number..... | 537 | 160 | 193 |
| | Value..... | \$525,605 | \$150,977 | \$184,865 |
| | Other— | | | |
| | Number..... | 2,643 | 8,115 | 14,905 |
| | Value..... | \$2,413,176 | \$2,982,161 | \$3,005,351 |
| | Street-railroad cars: | | | |
| | Number..... | 603 | 418 | 935 |
| | Value..... | \$2,023,922 | \$994,654 | \$1,090,854 |
| | Passenger— | | | |
| | Number..... | 558 | 331 | 902 |
| | Value..... | \$1,903,317 | \$930,791 | \$1,062,172 |
| | Other— | | | |
| | Number..... | 45 | 87 | 33 |
| | Value..... | \$120,605 | \$63,863 | \$28,682 |
| | All other products..... | \$40,184,273 | \$22,801,408 | \$19,890,014 |

¹ In addition, 8,977 cars, valued at \$5,024,871, and parts and repairs to the value of \$210,487, were reported by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² In addition, 2,541 cars, valued at \$1,012,820, and parts and repairs to the value of \$101,073, were reported by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

Cars, street-railroad.—The following table presenting comparative statistics of products for establishments constructing street or electric railroad cars does not include cars made in the shops of railroad companies or by concerns primarily engaged in making steam-railroad cars. In 1899 the value of all products was \$7,305,368 and in 1909 only \$7,809,866, a slight increase thus being shown for the decade. The value of products in 1904, however, exceeded that in 1909. The decrease in the construction of open cars since 1904 is especially marked.

| Table 93 | PRODUCT. | 1909 | 1904 |
|-----------------------------|-------------------------------|-------------|--------------|
| | Total value..... | \$7,809,866 | \$10,844,196 |
| Electric-railroad cars: | | | |
| | Number..... | 1,922 | 3,966 |
| | Value..... | \$4,602,435 | \$8,302,512 |
| Closed— | | | |
| | Number..... | 1,323 | 2,621 |
| | Value..... | \$3,500,781 | \$5,777,257 |
| Combination— | | | |
| | Number..... | 369 | 502 |
| | Value..... | \$704,309 | \$1,240,584 |
| Open— | | | |
| | Number..... | 95 | 554 |
| | Value..... | \$141,008 | \$860,349 |
| Freight, express, and mail— | | | |
| | Number..... | 92 | 16 |
| | Value..... | \$179,293 | \$24,022 |
| Other varieties— | | | |
| | Number..... | 43 | 273 |
| | Value..... | \$77,044 | \$400,020 |
| Steam-railroad cars: | | | |
| | Freight service, all classes— | | |
| | Number..... | 167 | 136 |
| | Value..... | \$111,813 | \$59,663 |
| All other products..... | | \$3,095,618 | \$2,482,021 |

¹ Products were not shown in detail for 1899; the total value was \$7,305,368.

² In addition, 607 cars, valued at \$2,033,922, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

³ In addition, 418 cars, valued at \$994,654, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

⁴ Includes 38 horse cars, valued at \$29,182.

Summary for railroad cars.—The following table assembles the statistics of all railroad cars constructed, including those made in establishments not engaged primarily in the construction of railroad cars:

| Table 94 | PRODUCT. | 1909 | 1904 | 1899 |
|------------------------------------|------------------|---------------|---------------|------------------|
| | Total value..... | \$102,187,896 | \$110,249,222 | ..... |
| Steam-railroad cars | | \$94,874,287 | \$100,346,912 | \$86,050,664 |
| Passenger service— | | | | |
| | Number..... | 1,819 | 2,446 | 1,369 |
| | Value..... | \$15,120,961 | \$20,486,260 | \$8,810,032 |
| Freight service ¹ — | | | | |
| | Number..... | 96,648 | 117,494 | 143,133 |
| | Value..... | \$79,753,326 | \$79,860,652 | \$77,240,632 |
| Street-railroad cars: ² | | | | |
| | Number..... | 2,772 | 4,694 | (³) |
| | Value..... | \$7,263,109 | \$9,902,310 | (⁴) |

¹ Including all service not passenger.

² Chiefly electric.

³ Not reported separately; the total value of products of establishments engaged primarily in the construction of street-railroad cars amounted to \$7,305,368.

MISCELLANEOUS INDUSTRIES.

Statistics for all industries that can not properly be classified with any of the groups before presented, on account of the character either of the products or of the raw materials used, are given under the above head.

Agricultural implements.—Table 95 presents comparative statistics of the production of agricultural implements. The value of all products increased from \$101,207,428 in 1899 to \$146,329,268 in 1909, or 44.6

per cent. This includes the value of miscellaneous agricultural implements and parts not classifiable under either of the four groups shown separately and of a large number of products not distinctively agricultural, but made by manufacturers of agricultural implements, such as windmills, carriages and wagons, engines, presses, castings, lawn swings, etc. In 1909 the aggregate value of the four groups of agricultural implements—seeders and planters, implements of cultivation, harvesting implements, and separators—was \$94,524,494, compared with \$79,335,400 in 1904, an increase of 19.1 per cent.

| Table 95 | PRODUCT. | 1909 | 1904 | 1899 |
|--|------------------|---------------|------------------|------------------|
| | Total value..... | \$146,329,268 | \$112,007,344 | \$101,207,428 |
| Implements of cultivation..... | | \$35,246,030 | \$30,007,900 | |
| Seeders and planters..... | | \$13,678,921 | \$11,225,122 | |
| Harvesting implements..... | | \$34,568,131 | \$30,862,435 | \$36,010,506 |
| Seed separators..... | | \$11,030,412 | \$6,639,893 | |
| All other products..... | | \$48,090,082 | \$30,703,648 | |
| Amount received for repair work..... | | \$3,114,692 | \$1,968,296 | \$3,196,922 |
| Principal kind of implements, by number. | | | | |
| Implements of cultivation: | | | | |
| Cultivators— | | | | |
| Beet..... | | 3,172 | 3,459 | 2,908 |
| Small..... | | 499,696 | 239,173 | 207,171 |
| Wheeled..... | | 435,429 | 313,088 | 295,799 |
| Cotton scrapers..... | | 20,180 | 22,519 | 15,230 |
| Harrow— | | | | |
| Disk..... | | 193,000 | 104,323 | 97,261 |
| Spring-tooth..... | | 112,832 | 85,408 | 380,259 |
| Spike-tooth..... | | 294,988 | 262,442 | |
| Plows— | | | | |
| Disk..... | | 22,132 | 39,146 | 17,345 |
| Gang..... | | 91,686 | (²) | (²) |
| Shovel..... | | 254,737 | 121,999 | 102,329 |
| Steam..... | | 2,355 | 1,599 | 207 |
| Sulky or wheel..... | | 124,965 | 138,899 | 136,195 |
| Walking..... | | 1,119,006 | 956,898 | 819,022 |
| Seeders and planters: | | | | |
| Seeders— | | | | |
| Broadcast..... | | 38,007 | 33,546 | 36,862 |
| Combination..... | | 23,963 | | |
| Corn planters— | | | | |
| Hand..... | | 96,465 | 86,553 | 129,515 |
| Horse..... | | 122,780 | 90,329 | 78,595 |
| Listers..... | | 44,840 | 23,012 | 24,595 |
| Cotton planters..... | | 79,271 | 127,682 | 45,876 |
| Potato planters..... | | 23,092 | 35,756 | 25,308 |
| Drills— | | | | |
| Corn..... | | 20,137 | 28,228 | 21,940 |
| Disk..... | | 21,292 | (²) | (²) |
| Grain..... | | 68,611 | 76,929 | 61,685 |
| All other..... | | 32,507 | 696 | 5,362 |
| Seed sowers..... | | 7,847 | 69,910 | 53,293 |
| Harvesting implements: | | | | |
| Grain cradles..... | | 22,635 | 30,056 | 36,163 |
| Harvesters— | | | | |
| Bean..... | | 1,409 | 665 | 1,425 |
| Corn..... | | 19,663 | 6,924 | 20,707 |
| Grain..... | | 129,274 | 198,510 | 233,542 |
| Harvesters and thrashers combined..... | | 543 | (²) | (²) |
| Other..... | | 1,797 | 3,161 | 6,283 |
| Hay carriers..... | | 45,064 | 85,121 | 54,308 |
| Hayforks, horse..... | | 43,676 | 62,801 | 51,770 |
| Hay loaders..... | | 34,708 | 27,174 | 7,273 |
| Hayrakes, horse..... | | 206,260 | 290,297 | 216,545 |
| Haystackers..... | | 17,212 | 8,670 | 12,069 |
| Hay tedders..... | | 34,399 | 35,745 | 14,519 |
| Mowers..... | | 359,264 | 273,285 | 399,616 |
| Potato diggers, horse..... | | 25,632 | 11,798 | (²) |
| Reapers..... | | 58,294 | 60,996 | 35,945 |
| Seed separators: | | | | |
| Clover hullers..... | | 437 | 351 | 661 |
| Corn huskers..... | | 372 | 1,327 | 10,726 |
| Corn huskers and shredders..... | | 1,240 | | |
| Corn shellers— | | | | |
| Hand..... | | 74,223 | 47,189 | 106,381 |
| Power..... | | 9,649 | 6,082 | 8,185 |
| Fanning mills..... | | 33,905 | 22,964 | 30,369 |
| Thrashers— | | | | |
| Horsepower..... | | 822 | 2,237 | 1,314 |
| Steam power..... | | 23,586 | 7,360 | 3,651 |

¹ In addition, agricultural implements, to the value of \$2,989,276, in 1909, and to the value of \$1,849,679, in 1904, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² Not reported separately.

Electrical machinery, apparatus, and supplies.—Table 96 summarizes the statistics of the output of electrical machinery, apparatus, and supplies, and

includes figures for such products made by establishments engaged primarily in the manufacture of other products, as well as for all products of establishments engaged primarily in the manufacture of electrical machinery, apparatus, and supplies. The value of all products was \$243,965,093 in 1909, as compared with \$105,831,865 in 1899, an increase for the decade of 130.5 per cent. Among the leading groups the highest rate of increase is for incandescent lamps, the value of which was \$3,515,118 in 1899 and \$15,714,809 in 1909.

| Table 96 | PRODUCT. | 1909 | 1904 | 1899 |
|---|---------------------------------|----------------------|----------------------|----------------------|
| | Total value..... | \$243,965,093 | \$159,551,402 | \$105,831,865 |
| Dynamoes: | | | | |
| | Number..... | 16,791 | 15,080 | 10,527 |
| | Kilowatt capacity..... | 1,405,950 | 998,182 | 578,124 |
| | Value..... | \$13,081,048 | \$11,084,234 | \$10,472,576 |
| Dynamotors, motor generators, boosters, rotary converters, and double current generators..... | | \$3,154,733 | \$1,740,534 | \$370,747 |
| Transformers..... | | \$8,801,019 | \$4,468,507 | \$2,962,871 |
| Switchboards, panel boards, and cut-out cabinets..... | | \$5,971,804 | \$3,786,044 | \$1,846,024 |
| Motors: | | | | |
| | Total number..... | 504,030 | 200,343 | 159,780 |
| | Horsepower..... | 2,733,418 | 1,493,012 | 1,221,482 |
| | Value..... | \$32,087,482 | \$22,370,626 | \$19,505,504 |
| For power— | | | | |
| | Number..... | 243,423 | 79,377 | 35,004 |
| | Horsepower..... | 1,683,677 | 678,910 | 515,705 |
| | Value..... | \$18,306,451 | \$13,120,948 | \$7,551,480 |
| For automobiles— | | | | |
| | Number..... | 2,796 | 1,810 | 3,017 |
| | Horsepower..... | 12,471 | 19,907 | 8,220 |
| | Value..... | \$294,152 | \$152,985 | \$192,030 |
| For fans— | | | | |
| | Number..... | 199,113 | 102,535 | 97,577 |
| | Horsepower..... | 173,033 | 30,790 | 12,766 |
| | Value..... | \$2,450,730 | \$1,168,254 | \$1,055,869 |
| For elevators— | | | | |
| | Number..... | 4,988 | 1,333 | 885 |
| | Horsepower..... | 63,585 | 13,398 | 6,730 |
| | Value..... | \$1,183,653 | \$638,473 | \$2,523,901 |
| For railways, and miscellaneous services, including value of parts and supplies— | | | | |
| | Number..... | 53,710 | 20,779 | 23,197 |
| | Horsepower..... | 795,652 | 750,001 | 678,001 |
| | Value..... | \$9,847,487 | \$7,290,266 | \$8,182,724 |
| Storage batteries, including value of parts and supplies: | | | | |
| | Weight of plates in pounds..... | 23,119,331 | 16,113,073 | (¹) |
| | Value..... | \$4,078,209 | \$2,645,749 | \$2,559,001 |
| Primary batteries, including value of parts and supplies: | | | | |
| | Number..... | 34,333,531 | 6,623,162 | 2,054,765 |
| | Value..... | \$6,934,261 | \$1,598,144 | \$1,119,444 |
| Are lamps: | | | | |
| | Number..... | 123,985 | 195,157 | 158,187 |
| | Value..... | \$1,700,959 | \$1,574,422 | \$1,827,771 |
| Searchlights, projectors, and focusing lamps..... | | \$935,874 | \$114,795 | \$225,035 |
| Incandescent lamps..... | | \$15,714,809 | \$6,953,205 | \$3,515,118 |
| Carbon filament..... | | \$6,157,066 | | |
| Tungsten..... | | \$6,241,133 | \$6,703,454 | \$3,442,183 |
| Gern, tantalum, glowler, and vacuum and vapor lamps..... | | \$2,715,991 | | |
| Decorative and miniature lamps, X-ray bulbs, vacuum tubes, etc..... | | \$600,619 | \$240,751 | \$72,935 |
| Sockets, receptacles, bases, etc..... | | \$4,521,729 | \$2,010,860 | \$503,929 |
| Electric-lighting fixtures of all kinds..... | | \$6,128,282 | \$3,294,006 | \$3,750,670 |
| Telephone apparatus..... | | \$1,957,432 | \$1,111,194 | \$1,642,206 |
| Telephone apparatus..... | | \$14,259,357 | \$15,863,098 | \$10,512,412 |
| Insulated wires and cables..... | | \$51,624,737 | \$34,519,090 | \$21,292,001 |
| Electric conduits..... | | \$5,098,264 | \$2,416,245 | \$1,066,103 |
| Annunciators—domestic, hotel, and office..... | | \$235,567 | \$185,870 | \$224,885 |
| Electric clocks and time mechanisms..... | | \$352,513 | \$373,926 | \$132,149 |
| Fuses..... | | \$1,001,719 | \$898,079 | \$505,497 |
| Lightning arresters..... | | \$940,171 | \$587,124 | |
| Rheostats and resistances..... | | \$2,674,963 | \$932,925 | |
| Heating, cooking, and welding apparatus..... | | \$1,003,038 | | \$1,186,878 |
| Electric flatirons..... | | \$951,074 | \$395,827 | |
| Electric measuring instruments..... | | \$7,800,010 | \$5,004,703 | \$1,842,135 |
| Electrical therapeutic apparatus..... | | \$1,107,858 | \$1,036,962 | (²) |
| Magneto-ignition apparatus, sparks, coils, etc..... | | \$6,002,343 | \$678,077 | (²) |
| Electric switches, signals, and attachments..... | | \$5,377,843 | \$1,451,337 | \$1,129,891 |
| Circuit fittings of all kinds..... | | \$1,080,287 | \$3,525,446 | (²) |
| All other products..... | | \$39,601,708 | \$28,978,444 | \$17,448,098 |

¹ Includes values of electrical machinery, apparatus, and supplies made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation, as follows: 1909, \$22,656,530; 1904, \$18,742,033; and 1899, \$13,397,430.

² Not reported separately.

Ice, manufactured.—Table 97 includes the product of all establishments engaged primarily in manufacturing ice for sale, but does not include establishments making ice for their own use. Ice made for sale by establishments engaged chiefly in some other business, such as breweries, is reported in a footnote.

The value of all products of the industry proper increased from \$13,874,513 in 1899 to \$42,953,055 in 1909, or 209.6 per cent. The quantity of ice produced increased at about the same rate, and amounted to 12,647,949 tons in 1909.

| Table 97 | 1909 | 1904 | 1899 |
|---------------------------|---------------------|---------------------|---------------------|
| MATERIALS. | | | |
| Ammonia used..... | \$1,021,913 | \$613,138 | \$369,549 |
| Compressor system— | | | |
| Anhydrous— | | | |
| Pounds..... | 3,097,191 | 1,944,266 | 946,066 |
| Cost..... | \$820,222 | \$493,524 | \$249,838 |
| Absorption system— | | | |
| Anhydrous— | | | |
| Pounds..... | 369,093 | 136,604 | 109,869 |
| Cost..... | \$100,283 | \$37,506 | \$20,842 |
| Aqua— | | | |
| Pounds..... | 1,670,098 | 1,347,561 | 1,323,454 |
| Cost..... | \$95,408 | \$82,108 | \$79,869 |
| PRODUCTS. | | | |
| Total value..... | \$42,953,055 | \$23,790,045 | \$13,874,513 |
| Ice: | | | |
| Tons (2,000 pounds)..... | 12,647,949 | 7,199,448 | 4,294,439 |
| Value (2,000 pounds)..... | \$39,889,263 | \$22,450,503 | \$13,303,874 |
| Can— | | | |
| Tons (2,000 pounds)..... | 11,671,547 | 6,095,789 | 4,139,764 |
| Value (2,000 pounds)..... | \$37,085,533 | \$21,020,547 | \$12,863,160 |
| Plate— | | | |
| Tons (2,000 pounds)..... | 976,402 | 503,659 | 154,675 |
| Value (2,000 pounds)..... | \$2,803,730 | \$1,429,956 | \$440,714 |
| All other products..... | \$3,063,702 | \$1,339,542 | \$570,639 |

¹ Includes 148,373 pounds of aqua ammonia, costing \$8,755.

² In addition, in 1909, 1,532,259 tons of ice, valued at \$4,249,700, and in 1904, 814,680 tons, valued at \$1,899,912, were produced by establishments engaged primarily in the manufacture of products other than ice.

³ Includes, for purposes of comparison, products valued at \$93,535, not included in the general tables for this industry at census of 1900.

Lumber and timber products.—Beginning with 1906 an annual canvass of forest products has been made by the Bureau of the Census in cooperation with the Forest Service of the Department of Agriculture. The statistics for the year 1909 given in the following table are compiled from this annual report; those for 1904 and 1899 are from the regular census reports.

The totals for 1909 include statistics for some small neighborhood mills sawing chiefly or exclusively for local consumption, also a relatively small number of establishments using logs or bolts as material and engaged primarily in the manufacture of products other than those covered by the classified lumber and timber products industry, which classes are not represented in the totals for the other two years. Detailed statistics for the lumber and other forest-products industries will be found in the several annual reports published by the Bureau of the Census. The figures given in Table 98 can not be compared with those given in Table 110 because in the latter table the statistics cover not only the products of the sawmills, shingle and lath mills, but also the products of planing mills operated independently of sawmills, logging camps, veneer mills, and box factories.

| Table 98 | PRODUCT. | 1909 | 1904 | 1899 |
|---|----------|----------------------|----------------------|----------------------|
| Total value..... | | \$724,705,760 | \$465,153,682 | \$414,058,487 |
| Lumber: | | | | |
| Total quantity (M feet, board measure)..... | | 44,509,761 | 34,135,139 | 135,084,166 |
| Total value..... | | \$684,479,859 | \$435,708,084 | \$390,089,873 |
| Softwoods— | | | | |
| Quantity..... | | 33,896,959 | 27,353,312 | 26,153,093 |
| Value..... | | \$477,345,046 | \$319,835,746 | \$268,481,112 |
| Yellow pine— | | | | |
| Quantity..... | | 16,277,185 | 11,621,781 | 9,658,548 |
| Value..... | | \$206,505,297 | \$114,780,000 | \$81,749,300 |
| Western pine— | | | | |
| Quantity..... | | 1,499,985 | 1,290,528 | 944,560 |
| Value..... | | \$23,077,854 | \$14,586,149 | \$9,163,256 |
| White pine— | | | | |
| Quantity..... | | 3,900,034 | 5,332,704 | 7,742,391 |
| Value..... | | \$70,830,131 | \$78,594,717 | \$98,002,555 |
| Douglas fir— | | | | |
| Quantity..... | | 4,856,378 | 2,928,409 | 1,736,507 |
| Value..... | | \$60,435,793 | \$27,862,228 | \$15,059,038 |
| Hemlock— | | | | |
| Quantity..... | | 3,051,399 | 3,268,787 | 3,420,673 |
| Value..... | | \$42,590,800 | \$38,938,154 | \$34,136,892 |
| Spruce— | | | | |
| Quantity..... | | 1,748,547 | 1,303,886 | 1,448,091 |
| Value..... | | \$29,561,315 | \$18,289,327 | \$16,322,666 |
| Cypress— | | | | |
| Quantity..... | | 955,635 | 749,592 | 495,836 |
| Value..... | | \$19,549,741 | \$13,115,339 | \$9,604,495 |
| Redwood— | | | | |
| Quantity..... | | 521,630 | 519,267 | 360,167 |
| Value..... | | \$7,720,124 | \$6,661,499 | \$3,645,608 |
| Cedar— | | | | |
| Quantity..... | | 346,008 | 223,035 | 232,975 |
| Value..... | | \$6,901,948 | \$3,201,331 | \$2,542,818 |
| All other— | | | | |
| Quantity..... | | 740,158 | 215,325 | 113,312 |
| Value..... | | \$10,182,043 | \$2,806,402 | \$1,271,884 |
| Hardwoods— | | | | |
| Quantity..... | | 10,612,802 | 6,781,827 | 8,634,021 |
| Value..... | | \$207,134,813 | \$115,872,338 | \$110,817,192 |
| Oak— | | | | |
| Quantity..... | | 4,414,457 | 2,902,855 | 4,438,027 |
| Value..... | | \$90,512,069 | \$50,832,303 | \$61,174,129 |
| Maple— | | | | |
| Quantity..... | | 1,106,604 | 587,558 | 633,466 |
| Value..... | | \$17,447,814 | \$8,780,727 | \$7,495,052 |
| Red gum— | | | | |
| Quantity..... | | 706,945 | 523,990 | 285,417 |
| Value..... | | \$9,334,268 | \$5,693,555 | \$2,747,680 |
| Chestnut— | | | | |
| Quantity..... | | 663,891 | 243,837 | 206,688 |
| Value..... | | \$10,703,130 | \$3,356,054 | \$2,764,089 |
| Birch— | | | | |
| Quantity..... | | 452,370 | 224,009 | 132,601 |
| Value..... | | \$7,666,186 | \$3,459,501 | \$1,667,621 |
| Basswood— | | | | |
| Quantity..... | | 399,151 | 228,041 | 308,069 |
| Value..... | | \$7,781,563 | \$3,845,885 | \$3,954,625 |
| Elm— | | | | |
| Quantity..... | | 347,456 | 258,330 | 456,731 |
| Value..... | | \$6,088,098 | \$3,732,609 | \$5,240,530 |
| Cottonwood— | | | | |
| Quantity..... | | 265,600 | 321,574 | 415,124 |
| Value..... | | \$4,794,424 | \$4,797,779 | \$4,303,544 |
| Ash— | | | | |
| Quantity..... | | 291,209 | 169,178 | 269,120 |
| Value..... | | \$7,116,089 | \$3,174,861 | \$4,263,599 |
| Hickory— | | | | |
| Quantity..... | | 333,929 | 106,824 | 96,636 |
| Value..... | | \$10,283,776 | \$2,557,601 | \$1,814,500 |
| Walnut— | | | | |
| Quantity..... | | 46,108 | 31,455 | 38,681 |
| Value..... | | \$1,972,835 | \$1,435,509 | \$1,411,611 |
| Sycamore— | | | | |
| Quantity..... | | 56,511 | 18,002 | 29,715 |
| Value..... | | \$834,612 | \$236,856 | \$327,933 |
| All other— | | | | |
| Quantity..... | | 1,528,571 | 1,166,474 | 1,323,746 |
| Value..... | | \$32,599,949 | \$23,969,098 | \$19,662,279 |
| Lath: | | | | |
| Quantity (thousands)..... | | 3,703,195 | 2,647,847 | 2,523,998 |
| Value..... | | \$9,963,439 | \$5,435,968 | \$4,696,909 |
| Shingles: | | | | |
| Quantity (thousands)..... | | 14,907,371 | 14,547,477 | 12,102,017 |
| Value..... | | \$30,262,462 | \$24,009,810 | \$18,839,705 |

¹ Includes 297,082 M feet of lumber, board measure, valued at \$5,191,569, reported as "other sawed products," and not by kinds of wood.

Pianos and organs and materials.—Table 99 includes the statistics for pianos and organs, and materials therefor, but does not include the products of establishments engaged primarily in the manufacture of other musical instruments. The value of all products increased from \$41,024,244 in 1899 to \$89,789,544 in 1909, or 118.9 per cent, the increase being almost

wholly in the value of pianos and player attachments for pianos. A marked feature is the gain in the number of pianos with player attachments manufactured, the output of which increased during the period 1904 to 1909 from 1,868 to 34,495, or seventeen fold. A large decrease occurred between 1904 and 1909 in the number of reed organs made.

| Table 99 | PRODUCT. | 1909 | 1904 | 1899 |
|--|----------|---------------------|---------------------|---------------------|
| Total value..... | | \$89,789,544 | \$66,062,630 | \$41,024,244 |
| Pianos: | | | | |
| Number..... | | 374,174 | 261,197 | 171,011 |
| Value..... | | \$39,501,225 | \$41,479,479 | \$27,002,852 |
| Upright— | | | | |
| Number..... | | 345,413 | 253,825 | 176,760 |
| Value..... | | \$35,462,556 | \$37,815,056 | \$25,901,432 |
| Without player attachment— | | | | |
| Number..... | | 326,918 | 251,967 | 166,536 |
| Value..... | | \$36,187,555 | \$37,397,574 | \$26,256,687 |
| For or with player attachment— | | | | |
| Number..... | | 34,495 | 1,868 | 224 |
| Value..... | | \$9,275,001 | \$417,902 | \$44,745 |
| Grand— | | | | |
| Number..... | | 8,741 | 7,372 | 4,251 |
| Value..... | | \$4,038,669 | \$3,663,423 | \$1,701,420 |
| Player attachments made separate from pianos: | | | | |
| Number..... | | 10,598 | 20,361 | 6,158 |
| Value..... | | \$1,474,630 | \$2,664,266 | \$907,873 |
| Organs: | | | | |
| Number..... | | 65,335 | 113,966 | 197,258 |
| Value..... | | \$5,309,016 | \$6,152,032 | \$5,217,261 |
| Pipe— | | | | |
| Number..... | | 1,224 | 961 | 564 |
| Value..... | | \$2,713,587 | \$1,989,979 | \$1,177,021 |
| Reed— | | | | |
| Number..... | | 64,111 | 113,065 | 196,694 |
| Value..... | | \$2,595,429 | \$4,162,053 | \$4,040,240 |
| Parts and materials..... | | \$29,417,702 | \$12,626,892 | \$8,196,256 |
| All other products..... | | \$3,089,911 | \$3,592,901 | |

¹ In addition, in 1909, parts and materials to the value of \$69,188; in 1904, 1,695 organs, valued at \$149,114; and in 1899, 250 pianos, valued at \$37,610; and 1,144 organs, valued at \$39,508, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

² Includes a few pianos with player attachments.

Paper and wood pulp.—Table 100 includes statistics for all establishments engaged in the manufacture of wood pulp and in the manufacture of paper, either separately or in conjunction. The total production of wood pulp in 1909 was 2,495,523 tons; in 1904, 1,921,768 tons; and in 1899, 1,179,535 tons. The percentage of increase for the decade was 111.6. Sulphite fiber shows the highest rate of increase, 144.6 per cent. An increasing proportion of the wood pulp is made by establishments which themselves consume it in making paper; in 1909, 63.5 per cent was so consumed by the establishments making it.

The value of all products, which includes some duplication, increased from \$127,326,162 in 1899 to \$267,656,964 in 1909, or 110.2 per cent. The output of paper products increased from 2,167,593 tons in 1899 to 4,216,708 tons in 1909, or 94.5 per cent, and their value from \$107,909,046 to \$232,741,049, or 115.7 per cent. Paper stock used for which quantities are reported aggregated 4,588,160 tons in 1909, of which wood pulp formed 61.6 per cent; old and waste paper, 21.4 per cent; rags, 7.8 per cent; straw, 6.6 per cent; and manila stock, 2.6 per cent. The ton of 2,000 pounds is used for showing quantities.

| Table 100 | 1909 | 1904 | 1899 | | 1909 | 1904 | 1899 |
|---------------------------------------|---------------|---------------|---------------|-------------------------------------|--------------|--------------|--------------|
| MATERIALS. | | | | PRODUCTS—continued. | | | |
| Total cost..... | \$165,442,341 | \$111,251,478 | \$70,530,236 | Wrapping paper—Continued. | | | |
| Pulp wood..... | \$33,772,475 | \$20,800,871 | \$9,837,516 | Bogus or wood manila, all grades— | | | |
| Wood pulp, purchased: | | | | Tons..... | 367,932 | 228,371 | 203,826 |
| Tons..... | 1,241,914 | 877,702 | 644,006 | Value..... | \$19,777,707 | \$10,099,772 | \$9,148,077 |
| Cost..... | \$43,861,357 | \$27,633,104 | \$18,369,464 | All other— | | | |
| Ground— | | | | Tons..... | 179,855 | 177,870 | 67,338 |
| Tons..... | 452,849 | 317,286 | 261,902 | Value..... | \$10,202,035 | \$8,774,804 | \$3,283,174 |
| Cost..... | \$9,487,508 | \$5,754,250 | \$4,361,211 | Boards: | | | |
| Soda fiber— | | | | Wood pulp— | | | |
| Tons..... | 154,626 | 120,978 | 94,042 | Tons..... | 71,036 | 60,863 | 44,187 |
| Cost..... | \$6,862,864 | \$5,047,105 | \$3,430,809 | Value..... | \$2,639,496 | \$2,347,250 | \$1,406,130 |
| Sulphite fiber— | | | | Straw— | | | |
| Tons..... | 920,929 | 433,160 | 273,194 | Tons..... | 171,789 | 167,278 | 157,534 |
| Cost..... | \$27,184,726 | \$16,567,122 | \$10,112,189 | Value..... | \$3,750,851 | \$4,367,560 | \$3,187,342 |
| Other chemical fiber— | | | | News— | | | |
| Tons..... | 8,410 | 6,278 | 14,803 | Tons..... | 74,606 | 38,560 | 32,119 |
| Cost..... | \$320,259 | \$264,678 | \$465,255 | Value..... | \$2,215,469 | \$1,174,216 | \$930,531 |
| Rags, including cotton and flax | | | | All other— | | | |
| waste and sweepings: | | | | Tons..... | 514,208 | 253,950 | 131,777 |
| Tons..... | 357,470 | 294,552 | 234,514 | Value..... | \$17,539,768 | \$9,070,531 | \$4,829,316 |
| Cost..... | \$10,721,559 | \$8,864,907 | \$6,595,427 | Other paper products: | | | |
| Old and waste paper: | | | | Tissues— | | | |
| Tons..... | 983,882 | 588,543 | 356,193 | Tons..... | 77,745 | 43,925 | 28,406 |
| Cost..... | \$13,691,120 | \$7,430,335 | \$4,869,409 | Value..... | \$8,553,054 | \$5,050,438 | \$3,486,652 |
| Manila stock, including jute bagging, | | | | Blotting— | | | |
| rope, waste, threads, etc.: | | | | Tons..... | 9,577 | 8,702 | 4,351 |
| Tons..... | 117,080 | 107,029 | 99,801 | Value..... | \$1,186,180 | \$1,046,790 | \$580,750 |
| Cost..... | \$3,590,033 | \$2,502,332 | \$2,437,250 | Building, roofing, asbestos, and | | | |
| Straw: | | | | sheathing— | | | |
| Tons..... | 303,137 | 304,585 | 367,305 | Tons..... | 225,824 | 145,024 | 96,915 |
| Cost..... | \$1,400,282 | \$1,502,886 | \$1,395,659 | Value..... | \$9,261,308 | \$4,845,028 | \$3,025,967 |
| All other materials..... | \$58,375,515 | \$42,517,283 | \$27,025,505 | Hanging— | | | |
| PRODUCTS. | | | | Tons..... | 92,158 | 62,606 | 54,330 |
| Total value..... | \$287,656,964 | \$188,715,189 | \$127,326,162 | Value..... | \$4,431,514 | \$3,013,404 | \$2,265,345 |
| News paper: | | | | Miscellaneous— | | | |
| In rolls for printing— | | | | Tons..... | 96,577 | 106,296 | 49,101 |
| Tons..... | 1,091,017 | 840,802 | 454,572 | Value..... | \$6,869,169 | \$6,729,820 | \$2,795,241 |
| Value..... | \$42,807,004 | \$32,763,308 | \$15,754,992 | Wood pulp made for sale or for con- | | | |
| In sheets for printing— | | | | sumption in mills other than where | | | |
| Tons..... | 84,537 | 72,020 | 114,640 | produced: | | | |
| Value..... | \$4,048,490 | \$3,143,152 | \$4,330,882 | Ground— | | | |
| Book paper: | | | | Tons..... | 310,747 | 273,400 | 280,052 |
| Book— | | | | Value..... | \$5,640,466 | \$4,323,495 | \$4,433,099 |
| Tons..... | 575,610 | 434,500 | 282,093 | Soda fiber— | | | |
| Value..... | \$42,846,674 | \$31,156,728 | \$19,466,804 | Tons..... | 155,844 | 130,366 | 99,014 |
| Coated— | | | | Value..... | \$6,572,152 | \$5,159,615 | \$3,612,602 |
| Tons..... | 95,213 | (2) | (2) | Sulphite fiber— | | | |
| Value..... | \$9,413,961 | (2) | (2) | Tons..... | 444,255 | 376,940 | 271,585 |
| Plate, lithograph, map, wood- | | | | Value..... | \$17,955,748 | \$13,661,404 | \$10,451,400 |
| cut, etc.— | | | | All other products..... | \$4,738,540 | \$1,024,195 | \$919,415 |
| Tons..... | 6,498 | 19,837 | 22,366 | Wood pulp. | | | |
| Value..... | \$555,352 | \$1,458,843 | \$2,018,958 | Quantity produced (including that | | | |
| Cover— | | | | used in mills where manufac- | | | |
| Tons..... | 17,578 | 22,150 | 18,749 | tured), total tons..... | 2,405,523 | 1,921,768 | 1,179,535 |
| Value..... | \$1,082,853 | \$2,023,986 | \$1,005,376 | Ground, tons..... | 1,179,206 | 968,076 | 586,374 |
| Cardboard, Bristol board, card mid- | | | | Soda fiber, tons..... | 208,626 | 196,770 | 177,124 |
| dles, tickets, etc.— | | | | Sulphite fiber, tons..... | 1,017,681 | 766,022 | 410,037 |
| Tons..... | 51,449 | 30,060 | 28,494 | EQUIPMENT. | | | |
| Value..... | \$3,352,151 | \$2,704,444 | \$1,719,813 | Paper machines: | | | |
| Fine paper: | | | | Total number..... | 1,480 | 1,369 | 1,232 |
| Writing— | | | | Capacity, yearly, tons..... | 5,293,397 | 3,857,903 | 2,782,219 |
| Tons..... | 169,125 | 131,034 | 90,204 | Fourdrinier..... | | | |
| Value..... | \$24,906,102 | \$19,321,045 | \$12,222,870 | Number..... | 804 | 752 | 663 |
| All other— | | | | Capacity per 24 hours, tons.. | 10,508 | 8,569 | (2) |
| Tons..... | 29,088 | 14,898 | 22,503 | Cylinder— | | | |
| Value..... | \$4,110,530 | \$2,928,125 | \$3,673,194 | Number..... | 676 | 617 | 569 |
| Wrapping paper: | | | | Capacity per 24 hours, tons.. | 0,316 | 4,740 | (2) |
| Manila (rope, jute, tag, etc.)— | | | | Pulp: | | | |
| Tons..... | 73,731 | 86,820 | 89,419 | Grinders, number..... | 1,435 | 1,362 | 1,168 |
| Value..... | \$6,989,436 | \$6,136,080 | \$5,929,704 | Digesters, total number..... | 542 | 517 | 426 |
| Heavy (mill wrappers, etc.)— | | | | Sulphite fiber, number..... | 348 | 309 | (2) |
| Tons..... | 108,561 | 96,992 | 82,875 | Soda fiber, number..... | 194 | 208 | (2) |
| Value..... | \$4,380,794 | \$4,035,588 | \$4,143,240 | Capacity, yearly, tons of pulp... | 3,405,621 | 2,044,753 | 1,536,431 |
| Straw— | | | | Ground, tons..... | 1,809,685 | 1,515,088 | (2) |
| Tons..... | 32,988 | 54,232 | 91,794 | Sulphite, tons..... | 1,250,983 | 885,092 | (2) |
| Value..... | \$870,419 | \$1,389,348 | \$2,027,518 | Soda, tons..... | 344,953 | 244,573 | (2) |

¹ In addition, paper and wood pulp to the value of \$2,567,267 was made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation. ² Not reported separately. ³ Not reported.

Phonographs and graphophones.—The following table gives comparative statistics for the manufacture of phonographs and graphophones. The value of all products increased from \$2,246,274 in 1899 to \$11,725,996 in 1909, or over fivefold, the bulk of the increase being in the first half of the decade. An important feature of the industry is the manufacture of records and blanks, the value of which formed 42.7 per cent of the total value of products in 1909, 45.7 per cent in 1904, and 24 per cent in 1899.

| Table 101 | PRODUCT. | 1909 | 1904 | 1899 |
|-------------------------------|-------------|--------------|--------------|-------------|
| Total value..... | | \$11,725,996 | \$10,237,075 | \$2,246,274 |
| Phonographs and graphophones: | | | | |
| Number..... | 844,681 | (2) | (2) | (2) |
| Value..... | \$5,400,684 | \$2,066,343 | \$1,240,503 | |
| Records and blanks: | | | | |
| Number..... | 27,183,959 | (2) | (2) | (2) |
| Value..... | \$5,007,104 | \$4,078,547 | \$539,370 | |
| All other products..... | | \$1,312,208 | \$2,592,185 | \$466,401 |

¹ In addition, records and parts to the value of \$31,889 were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation. ² Not reported.

Printing and publishing.—The statistics for printing and publishing given in the following table include book and job printing and publishing; the printing and publishing of music; newspapers and periodicals; bookbinding and blank-book making; engraving, including plate printing; and lithographing.

Under the head of job printing is included the job printing done by newspaper, periodical, and other establishments, as well as that of regular job-printing establishments. The value of products reported for the bookbinding and blank-book industry includes the value of all products of concerns engaged primarily in these branches, as well as the value of bookbinding and blank books reported by printing and publishing establishments. In like manner there is included under electrotyping, engraving, and lithographing the value of all products of establishments engaged primarily in these branches.

The value of all products was \$737,876,087 in 1909,

\$552,473,353 in 1904, and \$395,186,629 in 1899, the rate of increase for the period 1899–1909 being 86.7 per cent. The income of newspapers and periodicals from subscriptions, sales, and advertising was \$337,596,288 in 1909, as compared with \$175,789,610 in 1899, the rate of increase for the decade being 92 per cent. Of the total income from these sources, that from advertising formed 60 per cent in 1909 and 54.5 per cent in 1899, having increased much faster than that from subscriptions and sales.

Newspapers and periodicals increased in number from 18,793 in 1899 to 22,141 in 1909, or 17.8 per cent, and their aggregate circulation increased 53.9 per cent. The average circulation per issue was 7,428 in 1909, as compared with 6,866 in 1904 and 5,688 in 1899. The greatest relative increases in circulation during the decade were reported for dailies and monthlies. In the circulation of the latter, however, there was a decrease between 1904 and 1909.

| Table 102 | PRODUCT. | 1909 | 1904 | 1899 | PRODUCT. | 1909 | 1904 | 1899 |
|--------------|-------------------------------------|----------------------|----------------------|----------------------|--------------------------------------|-------------|-------------|------------------|
| | Total value..... | \$737,876,087 | \$552,473,353 | \$395,186,629 | NEWSPAPERS AND PERIODICALS— | | | |
| | Publications: | | | | continued. | | | |
| | Newspapers and periodicals..... | \$337,596,288 | \$256,816,282 | \$175,789,610 | <i>By character—Continued.</i> | | | |
| | Subscriptions and sales..... | \$135,063,043 | \$111,238,691 | \$79,928,483 | Commerce, finance, insurance, | | | |
| | Advertising..... | \$202,533,245 | \$145,517,591 | \$95,861,127 | railroads, etc.— | | | |
| | Newspapers..... | \$232,983,094 | (¹) | (¹) | Number..... | 364 | 364 | 190 |
| | Subscriptions and sales..... | \$84,438,702 | | | Aggregate circulation..... | 1,411,738 | 2,470,632 | (²) |
| | Advertising..... | \$148,544,392 | (¹) | (¹) | Trade journals generally— | | | |
| | Periodicals..... | \$104,603,194 | | | Number..... | 685 | 627 | 320 |
| | Subscriptions and sales..... | \$50,624,341 | | | Aggregate circulation..... | 3,572,441 | 3,428,596 | (²) |
| | Advertising..... | \$53,978,853 | | | General literature, including | | | |
| | Ready prints, patent insides and | | | | monthly and quarterly maga- | | | |
| | outsides..... | \$2,293,077 | (¹) | | zines— | | | |
| | Books and pamphlets— | | | | Number..... | 340 | 328 | 230 |
| | Published, or printed and | | | | Aggregate circulation..... | 31,322,035 | 36,615,677 | (²) |
| | published..... | \$62,930,394 | \$53,312,492 | | Medicine and surgery— | | | |
| | Printed for publication by | | | | Number..... | 197 | 192 | 111 |
| | others..... | \$10,209,509 | (¹) | | Aggregate circulation..... | 561,554 | 1,054,948 | (²) |
| | Sheet music and books of music— | | | | Law— | | | |
| | Published or printed and | | | | Number..... | 56 | 81 | 62 |
| | published..... | \$5,510,698 | \$4,673,685 | \$219,397,019 | Aggregate circulation..... | 151,346 | 194,695 | (²) |
| | Printed for publication by | | | | Science and mechanics— | | | |
| | others..... | \$1,000,966 | (¹) | | Number..... | 139 | 83 | 66 |
| | Products for sale and in execution | | | | Aggregate circulation..... | 1,421,955 | 525,523 | (²) |
| | of orders: | | | | Fraternal organizations— | | | |
| | Job printing..... | \$207,940,227 | \$149,262,070 | | Number..... | 419 | 450 | 200 |
| | Book binding and blank books | | | | Aggregate circulation..... | 6,982,235 | 5,356,427 | (²) |
| | Electrotyping, engraving, and | | | | Education and history— | | | |
| | lithographing..... | \$47,956,979 | \$35,018,234 | | Number..... | 202 | 173 | 120 |
| | All other products..... | \$11,885,141 | \$12,601,822 | | Aggregate circulation..... | 1,879,363 | 2,119,797 | (²) |
| | NEWSPAPERS AND PERIODICALS. | | | | Society, art, music, fashions, etc.— | | | |
| | Number..... | 22,141 | 21,848 | 18,793 | Number..... | 164 | 155 | 88 |
| | Aggregate circulation..... | 164,463,040 | 150,009,723 | 108,889,334 | Aggregate circulation..... | 13,445,661 | 15,289,491 | (²) |
| | <i>By period of issue:</i> | | | | College and school periodicals— | | | |
| | Daily (exclusive of Sunday)— | | | | Number..... | 271 | 178 | 139 |
| | Number..... | 2,600 | 2,452 | 2,226 | Aggregate circulation..... | 330,705 | 248,240 | (²) |
| | Aggregate circulation..... | 24,211,977 | 19,632,603 | 15,102,156 | Miscellaneous— | | | |
| | Sunday— | | | | Number..... | 139 | 538 | 298 |
| | Number..... | 520 | 494 | 567 | Aggregate circulation..... | 1,087,937 | 4,860,518 | (²) |
| | Aggregate circulation..... | 13,347,282 | 12,022,341 | (²) | <i>By language:</i> | | | |
| | Semiweekly and triweekly— | | | | English— | | | |
| | Number..... | 708 | 703 | 699 | Number..... | 29,744 | 29,599 | 17,761 |
| | Aggregate circulation..... | 2,648,308 | 3,233,658 | 3,061,478 | Aggregate circulation..... | 155,432,243 | 142,441,068 | (²) |
| | Weekly— | | | | Foreign (including foreign and | | | |
| | Number..... | 15,097 | 15,006 | 12,979 | English)— | | | |
| | Aggregate circulation..... | 40,822,965 | 36,226,717 | 34,242,052 | Number..... | 1,307 | 1,249 | 1,062 |
| | Monthly— | | | | Aggregate circulation..... | 9,690,797 | 7,568,655 | (²) |
| | Number..... | 2,491 | 2,500 | 1,817 | French— | | | |
| | Aggregate circulation..... | 63,280,535 | 64,306,155 | 37,889,897 | Number..... | 26 | 46 | 31 |
| | All other— | | | | Aggregate circulation..... | 446,799 | 252,135 | (²) |
| | Number..... | 725 | 693 | 505 | German— | | | |
| | Aggregate circulation..... | 20,151,973 | 14,588,249 | 16,613,751 | Number..... | 492 | 700 | 630 |
| | <i>By character:</i> | | | | Aggregate circulation..... | 4,434,146 | 3,922,227 | (²) |
| | News, politics, and family read- | | | | Italian— | | | |
| | ing— | | | | Number..... | 104 | 63 | 35 |
| | Number..... | 17,698 | 17,032 | 15,506 | Aggregate circulation..... | 500,475 | 319,450 | (²) |
| | Aggregate circulation..... | 61,074,990 | 53,355,893 | (²) | Scandinavian— | | | |
| | Religious— | | | | Number..... | 161 | 162 | 115 |
| | Number..... | 1,251 | 1,287 | 952 | Aggregate circulation..... | 1,118,601 | 1,149,619 | (²) |
| | Aggregate circulation..... | 29,523,777 | 22,383,631 | (²) | Letto-Slavic— | | | |
| | Agricultural, horticultural, dairy, | | | | Number..... | 169 | 128 | 75 |
| | stock raising, etc.— | | | | Aggregate circulation..... | 917,649 | 606,967 | (²) |
| | Number..... | 316 | 360 | 307 | All other— | | | |
| | Aggregate circulation..... | 11,327,253 | 8,106,275 | (²) | Number..... | 231 | 150 | 143 |
| | | | | | Aggregate circulation..... | 1,612,187 | 1,319,237 | (²) |

¹ Not reported separately.

² Included with circulation of dailies.

³ Not reported.

The statistics in regard to the number of books and pamphlets published in 1909, classified by character, are given below. Comparative statistics for earlier censuses are not available.

| Table 103 BOOKS AND PAMPHLETS. | Titles or editions. | Volumes. | Copies. |
|--|---------------------|---------------|--------------------|
| Total number published | 46,789 | 54,620 | 161,361,844 |
| Biography, correspondence..... | 554 | 616 | 657,464 |
| Description, geography, travel..... | 847 | 952 | 4,540,047 |
| Domestic and rural..... | 330 | 336 | 2,023,193 |
| Education..... | 10,390 | 12,159 | 41,636,847 |
| Fiction..... | 14,006 | 15,772 | 40,942,399 |
| Fine arts, illustrated gift books..... | 541 | 687 | 2,849,371 |
| History..... | 613 | 954 | 2,923,187 |
| Humor and satire..... | 208 | 211 | 885,262 |
| Juvenile..... | 4,167 | 4,202 | 10,184,030 |
| Law..... | 535 | 802 | 1,490,194 |
| Literature and collected works..... | 2,047 | 3,841 | 5,037,072 |
| Medical, hygiene..... | 681 | 738 | 1,519,480 |
| Philosophy..... | 222 | 262 | 265,077 |
| Physical and mathematical science..... | 291 | 307 | 356,413 |
| Poetry and the drama..... | 1,387 | 1,574 | 1,980,824 |
| Political and social science..... | 658 | 689 | 1,862,429 |
| Scientific and similar associations..... | 1,082 | 1,141 | 1,258,502 |
| Sports and amusements..... | 412 | 423 | 2,430,074 |
| Theology and religion..... | 5,096 | 6,539 | 23,008,230 |
| Useful arts..... | 512 | 538 | 1,104,599 |
| Works of reference..... | 1,560 | 1,927 | 7,799,590 |

Shipbuilding, including boat building.—The following table shows the value of work done on the different classes of water craft during the several census years, not including that done in Government establishments, and also the value of repair work and all other products of the shipbuilding industry. The total value of products was lower in 1909 than in 1904 or 1899.

| Table 104 PRODUCT. ¹ | 1909 | 1904 | 1899 |
|---|---------------------|---------------------|---------------------|
| Total value | \$73,360,315 | \$82,769,239 | \$74,532,277 |
| Work done during the year on vessels and boats..... | 42,310,925 | 56,121,227 | 37,719,308 |
| Vessels of 5 gross tons and over..... | 37,718,018 | 53,119,935 | 35,750,473 |
| Boats of less than 5 gross tons..... | 4,592,907 | 3,001,292 | 1,968,835 |
| Steam..... | 20,800 | | |
| Motor, gasoline, electric, and other..... | 3,155,375 | 1,879,288 | 1,059,365 |
| Sailboats, rowboats, canoes, scows, etc..... | 1,416,732 | 1,122,004 | 909,470 |
| Repair work..... | 20,678,043 | 22,829,040 | 23,134,436 |
| All other products..... | 4,370,747 | 3,818,072 | 13,678,533 |

¹ Not including work done in Government shipyards, valued in 1909 at \$25,872,033; in 1904, at \$17,265,469; and in 1899, at \$11,022,312.

² In addition, the following items were reported by establishments engaged primarily in the manufacture of products other than those covered by the industry designation: Work done on vessels of 5 tons and over, launched, \$418,905; vessels building but not launched, \$30,184; boats of under 5 tons, \$145,155; and other boat products and repairs, \$132,402; or a total of \$776,706.

³ In addition, the following items were reported by establishments engaged primarily in the manufacture of products other than those covered by the industry designation: Work done on vessels of 5 tons and over, launched, \$463,018; boats of under 5 tons, \$147,542; and other boat products and repairs, \$46,782; or a total of \$657,342.

The value of the products of governmental shipyards in 1909 was \$25,872,033; in 1904, \$17,265,469; and in 1899, \$11,022,312. Thus the total value of products reported for all establishments, governmental and private, was \$99,232,348 in 1909, \$100,034,708 in 1904, and \$85,554,589 in 1899. The increase of \$13,677,759, or 16 per cent, shown for the period 1899–1909, was due entirely to work of governmental establishments.

The following table shows the number of vessels of each class launched during the census years 1909, 1904, and 1899. These figures are not strictly comparable with those giving values presented in the preceding table, since the former cover all work done during the year, both on vessels launched during the year and on those not yet launched at its close. The number of vessels of nearly every class was less in 1909 than at the two preceding censuses, but the number of boats increased greatly, the number made by all establishments aggregating 8,577, of which number 97.3 per cent were gasoline motor boats.

| Table 105 CLASS OF VESSELS. | 1909 | 1904 | 1899 |
|--|---------|---------|---------|
| Vessels of 5 gross tons and over launched during the year: ¹ | | | |
| Number..... | 21,584 | 2,114 | 2,081 |
| Gross tons..... | 467,219 | 504,020 | 687,159 |
| Net tons..... | 381,198 | 424,708 | 542,324 |
| Steel vessels— | | | |
| Number..... | 158 | 155 | 134 |
| Gross tons..... | 254,986 | 154,314 | 262,516 |
| Net tons..... | 193,144 | 106,826 | 186,509 |
| Steam— | | | |
| Number..... | 96 | 122 | 123 |
| Gross tons..... | 219,617 | 140,047 | 237,379 |
| Net tons..... | 159,297 | 93,365 | 164,313 |
| Motor— | | | |
| Number..... | 15 | | |
| Gross tons..... | 2,406 | | |
| Net tons..... | 2,078 | | |
| Sail, with and without auxiliary— | | | |
| Number..... | 3 | 8 | 6 |
| Gross tons..... | 2,046 | 4,779 | 21,085 |
| Net tons..... | 1,735 | 4,591 | 18,348 |
| Unrigged— | | | |
| Number..... | 44 | 25 | 5 |
| Gross tons..... | 30,857 | 9,488 | 4,052 |
| Net tons..... | 30,034 | 8,870 | 3,848 |
| Wooden vessels— | | | |
| Number..... | 1,426 | 1,959 | 1,947 |
| Gross tons..... | 212,233 | 349,706 | 424,543 |
| Net tons..... | 188,054 | 317,882 | 355,815 |
| Steam— | | | |
| Number..... | 85 | 186 | 396 |
| Gross tons..... | 15,016 | 35,048 | 48,932 |
| Net tons..... | 9,662 | 23,365 | 32,845 |
| Motor— | | | |
| Number..... | 430 | 307 | |
| Gross tons..... | 0,923 | 3,157 | |
| Net tons..... | 5,146 | 2,333 | |
| Sail, with and without auxiliary— | | | |
| Number..... | 116 | 341 | 642 |
| Gross tons..... | 15,413 | 59,836 | 59,208 |
| Net tons..... | 12,055 | 50,483 | 51,772 |
| Unrigged— | | | |
| Number..... | 795 | 1,125 | 909 |
| Gross tons..... | 174,881 | 251,665 | 310,502 |
| Net tons..... | 160,291 | 241,701 | 271,198 |
| Boats of less than 5 gross tons, number: ⁴ | 8,577 | 3,499 | 1,687 |
| Steam..... | 8 | | |
| Motor..... | 8,569 | 3,499 | 1,687 |
| Gasoline..... | 8,342 | () | () |
| Electric..... | 12 | () | () |
| Other..... | 215 | () | () |

¹ Not including vessels launched in Government shipyards as follows: In 1909, 3 steel and 28 wooden vessels, the steel vessels having a total of 350 gross tons and the wooden a total of 1,709 gross tons, and in 1904, 17 steel and 14 wooden vessels, the steel vessels having a total of 23,850 gross tons and the wooden a total of 3,402 gross tons.

² In addition, there were built by establishments engaged primarily in the manufacture of products other than those covered by the industry designation, 8 steel and 14 wooden vessels, the steel vessels having a total of 5,429 gross tons and the wooden a total of 7,106 gross tons.

³ In addition, there were built by establishments engaged primarily in the manufacture of products other than those covered by the industry designation, 3 steel and 131 wooden vessels, the steel vessels having a total of 408 gross tons and the wooden a total of 21,019 gross tons.

⁴ Not including 63 boats built in Government shipyards in 1909 and 52 in 1904.

⁵ In addition, 412 boats were built by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

⁶ In addition, 305 boats were built by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

⁷ Not reported separately.

Laundries.—Steam laundries are not generally considered as manufacturing establishments, and therefore statistics for them have been excluded from prior censuses. Since the industry has, however, developed so rapidly, large amounts of capital now being invested, and many wage earners being employed, it should no longer be omitted from the industrial census. The establishments are conducted according to factory methods, and therefore the statistics are associated with those for the manufacturing industries of the Thirteenth Census. They are not included, however, in the general tables or in the totals for manufacturing industries.

During the year 1909 there were in the United States 5,186 laundries operated by the use of mechanical power. The capital reported by these establishments as invested in the industry amounted to \$68,935,000. In addition, such establishments rent a great deal of property, the annual rental paid by laundries for plant and equipment amounting in 1909 to \$2,277,000. The value of the work done was \$104,680,086.

In addition to ascertaining the average number of wage earners employed during the entire year, the census calls for the actual number of wage earners, by sex and age periods, employed on December 15, 1909, or the nearest representative day. On that date there were employed 112,064 wage earners, of whom 31,947, or 28.5 per cent, were men; 79,152, or 70.6 per cent, women; and 965, or 0.9 per cent, children under 16 years of age.

The following statement summarizes the statistics:

| | |
|--|---------------|
| Number of establishments..... | 5,186 |
| Capital invested..... | \$68,935,000 |
| Cost of materials used..... | \$17,696,000 |
| Salaries and wages, total..... | \$53,007,747 |
| Salaries..... | \$8,180,769 |
| Wages..... | \$44,826,978 |
| Miscellaneous expenses..... | \$14,483,497 |
| Value of products or amount received for work done.. | \$104,680,086 |

Employees:

| | |
|--|---------|
| Number of salaried officials and clerks..... | 9,170 |
| Average number of wage earners employed during the year..... | 109,484 |
| Actual number of wage earners employed on Dec. 15, 1909, or nearest representative day.. | 112,064 |
| Men 16 years and over..... | 31,947 |
| Women 16 years and over..... | 79,152 |
| Children under 16 years— | |
| Male..... | 274 |
| Female..... | 691 |
| Primary power used, horsepower..... | 123,477 |

The number of wage earners employed each month and the per cent which this number represented of the greatest number employed in laundries in any month were as follows:

65061°—12—33

Table 106

| MONTH. | WAGE EARNERS. | | MONTH. | WAGE EARNERS. | |
|---------------|---------------|----------------------|----------------|---------------|----------------------|
| | Number. | Per cent of maximum. | | Number. | Per cent of maximum. |
| January..... | 103,746 | 90.6 | July..... | 114,211 | 99.7 |
| February..... | 103,937 | 90.7 | August..... | 114,539 | 100.0 |
| March..... | 104,970 | 91.6 | September..... | 113,738 | 99.3 |
| April..... | 106,422 | 92.9 | October..... | 111,509 | 97.3 |
| May..... | 108,145 | 94.4 | November..... | 119,479 | 96.5 |
| June..... | 111,313 | 97.2 | December..... | 110,805 | 96.7 |

The different kinds of primary power, the number of engines, and the horsepower used in laundries during 1909 are shown in the following tabular statement:

Table 107

| KIND. | Number of engines or motors. | Horsepower. |
|----------------------------------|------------------------------|----------------|
| Primary power, total..... | | 123,477 |
| Owned..... | 4,527 | 109,870 |
| Steam..... | 4,119 | 105,272 |
| Gas..... | 379 | 4,593 |
| Water wheels..... | 18 | 456 |
| Water motors..... | 11 | 69 |
| Rented..... | | 13,607 |
| Electric..... | 2,491 | 11,157 |
| Other..... | | 2,450 |

The kind and amount of fuel used in laundries are shown in the following statement:

Table 108

| KIND. | Unit. | Quantity. |
|----------------------|-------------------|-----------|
| Anthracite coal..... | Tons (2,240 lbs.) | 178,640 |
| Bituminous coal..... | Tons (2,240 lbs.) | 986,734 |
| Coke..... | Tons (2,240 lbs.) | 14,795 |
| Wood..... | Cords | 94,723 |
| Oil..... | Barrels | 372,586 |
| Gas..... | 1,000 feet | 2,739,324 |

Small custom sawmills and gristmills.—Statistics for small custom sawmills and gristmills are not included in the general tables or in the totals for manufacturing industries, but are presented in the following summary. The cost of materials and value of products for gristmills include an estimate of the grain ground, but it was impossible to estimate the value of the lumber sawed in the custom sawmills.

Table 109

| | Small custom sawmills. | Small custom gristmills. |
|------------------------------------|------------------------|--------------------------|
| Number of establishments..... | 4,133 | 11,961 |
| Persons engaged in industry..... | 12,836 | 22,896 |
| Proprietors and firm members..... | 5,702 | 15,435 |
| Salaried employees..... | 44 | 147 |
| Wage earners (average number)..... | 7,090 | 7,014 |
| Primary horsepower..... | 93,280 | 272,703 |
| Capital..... | \$5,655,145 | \$21,258,519 |
| Expenses..... | 2,160,271 | 48,110,565 |
| Services..... | 1,696,152 | 1,196,549 |
| Materials..... | 97,574 | 146,314,868 |
| Miscellaneous..... | 366,545 | 609,157 |
| Value of products..... | 4,515,881 | * 55,115,553 |

* Includes estimated value of all grain ground.

* Includes estimate of value of products from all grain ground. In addition, custom ground products, valued at \$1,170,751, were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

ABSTRACT OF THE CENSUS—MANUFACTURES.

COMPARATIVE SUMMARY FOR THE UNITED STATES, BY SPECIFIED INDUSTRIES: 1909, 1904, AND 1899.

NOTES.—The figures for some industries do not represent the total production, because important establishments that manufacture the same class of products may be included in other industries. (See Introduction.)
 Primary horsepower includes power generated in manufacturing establishments plus electric and other power rented from outside sources; it does not include electric power generated by primary units of the establishments reporting.
 In the statistics of power for 1899 there is a difference of 154,728 horsepower between the total and the sum of the figures for the various industries. This is due to the impossibility of making correct revision of the figures for each industry for comparison with 1904 and 1909.

[A minus sign (—) denotes decrease.]

| Table 110 INDUSTRY. | Cen- sus. | Number of estab- lish- ments. | PERSONS ENGAGED IN INDUSTRY. | | | | Primary horse- power. | Capital. | Sala- ries. | Wages. | Cost of materials. | Value of products. | Value added by manu- facture (value of products less cost of mate- rials). | PER CENT OF INCREASE. | | |
|--|--------------|--|------------------------------|---|-----------------------------|---|-----------------------------|--------------|----------------|-------------|-----------------------|-----------------------|---|---|----------------------------|--|
| | | | Total. | Pro- pri- etors and firm mem- bers. | Salaried em- ployees. | Wage earners (average number). | | | | | | | | Wage earners (aver- age num- ber). | Value of prod- ucts. | |
| | | | | | | | | | | | | | | | | |
| Expressed in thousands. | | | | | | | | | | | | | | | | |
| All industries..... | 1909 | 268,491 | 7,678,578 | 273,265 | 790,287 | 6,615,046 | 18,675,376 | \$18,428,270 | \$938,575 | \$3,427,038 | \$12,142,791 | \$20,672,052 | \$8,529,261 | 21.0 | 39.7 | |
| | 1904 | 216,180 | 6,213,612 | 225,673 | 519,556 | 5,468,383 | 13,487,707 | 12,675,581 | 574,439 | 2,610,445 | 8,500,208 | 14,793,903 | 6,293,695 | 10.0 | 29.7 | |
| | 1899 | 207,514 | | | 364,120 | 4,712,793 | 10,097,893 | 8,975,256 | 380,771 | 2,008,361 | 6,575,851 | 11,408,927 | 4,831,076 | | | |
| Agricultural implements. | 1909 | 640 | 60,229 | 465 | 9,213 | 50,551 | 100,601 | 256,281 | 10,140 | 28,609 | 60,307 | 140,329 | 80,022 | 6.7 | 30.6 | |
| | 1904 | 648 | 55,089 | 406 | 7,199 | 47,394 | 89,738 | 106,741 | 7,573 | 25,003 | 48,281 | 112,007 | 63,726 | 1.7 | 10.7 | |
| | 1899 | 715 | | | 10,046 | 40,582 | 70,646 | 157,708 | 8,303 | 22,451 | 43,945 | 101,207 | 57,262 | | | |
| Artificial flowers and feathers and plumes. | 1909 | 412 | 11,583 | 520 | 1,047 | 10,016 | 334 | 9,093 | 1,160 | 3,974 | 13,627 | 23,981 | 10,354 | 130.6 | 357.0 | |
| | 1904 | 213 | 4,913 | 280 | 281 | 4,343 | 184 | 2,558 | 232 | 1,397 | 2,014 | 5,247 | 3,233 | -18.5 | -16.6 | |
| | 1899 | 224 | | | 285 | 5,331 | 113 | 3,633 | 291 | 1,501 | 2,703 | 6,293 | 3,530 | | | |
| Artificial stone. | 1909 | 3,439 | 15,202 | 4,208 | 1,037 | 9,957 | 12,185 | 16,010 | 785 | 5,342 | 7,043 | 18,596 | 11,553 | 297.3 | 350.5 | |
| | 1904 | 477 | 3,417 | 571 | 340 | 2,506 | 2,776 | 3,310 | 261 | 1,403 | 1,430 | 4,128 | 2,698 | | | |
| Artists' materials. | 1909 | 46 | 805 | 25 | 182 | 658 | 1,628 | 1,730 | 202 | 307 | 1,360 | 2,340 | 980 | 140.1 | 105.4 | |
| | 1904 | 28 | 372 | 30 | 68 | 274 | 568 | 876 | 67 | 137 | 687 | 1,139 | 452 | 37.0 | 129.2 | |
| | 1899 | 21 | | | 32 | 200 | 289 | 377 | 38 | 79 | 249 | 497 | 248 | | | |
| Automobiles, including bodies and parts. | 1909 | 743 | 85,359 | 405 | 9,233 | 75,721 | 75,550 | 173,837 | 9,479 | 48,694 | 131,046 | 249,202 | 117,556 | 528.4 | 729.7 | |
| | 1904 | 178 | 13,333 | 103 | 1,181 | 12,040 | 10,109 | 23,084 | 1,257 | 7,150 | 13,151 | 30,034 | 10,883 | 437.7 | 532.6 | |
| | 1899 | 57 | | | 268 | 2,241 | | 5,760 | 295 | 1,321 | 1,804 | 4,748 | 2,944 | | | |
| Awnings, tents, and sails. | 1909 | 621 | 5,747 | 648 | 857 | 4,242 | 2,022 | 7,865 | 809 | 2,188 | 8,377 | 14,499 | 6,122 | 23.6 | 28.7 | |
| | 1904 | 390 | 4,406 | 442 | 532 | 3,432 | 1,105 | 4,793 | 507 | 1,757 | 6,670 | 11,269 | 4,599 | 2.9 | 23.2 | |
| | 1899 | 340 | | | 416 | 3,385 | 921 | 3,537 | 325 | 1,569 | 5,228 | 9,144 | 3,916 | | | |
| Axle grease. | 1909 | 38 | 334 | 13 | 145 | 176 | 492 | 935 | 155 | 88 | 828 | 1,481 | 653 | 47.9 | 68.5 | |
| | 1904 | 25 | 196 | 22 | 55 | 119 | 210 | 608 | 55 | 62 | 368 | 779 | 511 | -6.3 | 22.4 | |
| | 1899 | 29 | | | 85 | 127 | 181 | 577 | 83 | 55 | 360 | 718 | 368 | | | |
| Babbitt metal and solder. | 1909 | 109 | 1,491 | 66 | 528 | 897 | 2,293 | 7,418 | 739 | 561 | 16,270 | 19,708 | 3,498 | 57.6 | 50.9 | |
| | 1904 | 75 | 882 | 70 | 243 | 560 | 1,138 | 4,129 | 205 | 338 | 10,804 | 13,100 | 2,236 | 6.4 | 42.5 | |
| | 1899 | 51 | | | 145 | 535 | 999 | 3,116 | 172 | 295 | 7,098 | 9,191 | 1,193 | | | |
| Bags, other than paper. | 1909 | 109 | 8,838 | 72 | 798 | 7,968 | 6,855 | 24,025 | 1,068 | 2,042 | 46,364 | 54,882 | 8,518 | 39.3 | 46.7 | |
| | 1904 | 79 | 6,308 | 54 | 532 | 5,722 | 4,522 | 12,387 | 602 | 1,820 | 30,758 | 37,399 | 6,641 | 45.9 | 90.3 | |
| | 1899 | 73 | | | 336 | 3,922 | 1,755 | 7,418 | 379 | 1,102 | 10,439 | 19,652 | 3,213 | | | |
| Bags, paper. | 1909 | 74 | 3,683 | 42 | 429 | 3,212 | 3,885 | 10,780 | 714 | 1,306 | 10,355 | 15,698 | 5,343 | 29.9 | 55.6 | |
| | 1904 | 62 | 2,886 | 53 | 360 | 2,473 | 2,927 | 11,441 | 405 | 930 | 6,595 | 10,087 | 3,492 | 24.3 | 48.4 | |
| | 1899 | 63 | | | 340 | 1,989 | 2,148 | 6,917 | 369 | 628 | 4,499 | 6,799 | 2,300 | | | |
| Baking powders and yeast. | 1909 | 144 | 3,531 | 110 | 1,266 | 2,155 | 3,335 | 33,647 | 1,710 | 1,040 | 9,338 | 20,775 | 11,437 | -12.0 | 9.1 | |
| | 1904 | 164 | 3,355 | 150 | 756 | 2,449 | 2,905 | 13,233 | 939 | 1,042 | 8,940 | 19,043 | 10,103 | 26.4 | 30.7 | |
| | 1899 | 191 | | | 749 | 1,938 | 2,446 | 8,338 | 835 | 717 | 7,127 | 14,568 | 7,441 | | | |
| Baskets, and rattan and willow ware. | 1909 | 450 | 5,419 | 476 | 279 | 4,604 | 7,196 | 4,190 | 244 | 1,747 | 2,335 | 5,695 | 3,360 | -8.7 | 9.8 | |
| | 1904 | 486 | 5,867 | 525 | 236 | 5,106 | 6,252 | 3,600 | 203 | 1,731 | 1,803 | 5,187 | 3,384 | 21.1 | 42.7 | |
| | 1899 | 454 | | | 182 | 4,217 | 5,097 | 2,844 | 140 | 1,213 | 1,335 | 3,636 | 2,301 | | | |
| Beet sugar. | 1909 | 58 | 8,389 | 1 | 1,184 | 7,204 | 57,202 | 129,629 | 1,709 | 4,808 | 27,265 | 48,122 | 20,857 | 81.8 | 97.3 | |
| | 1904 | 51 | 4,726 | | 763 | 3,963 | 35,490 | 55,923 | 1,005 | 2,487 | 14,487 | 24,394 | 9,907 | 101.2 | 233.1 | |
| | 1899 | 30 | | | 350 | 1,970 | 14,460 | 20,142 | 357 | 1,092 | 4,804 | 7,324 | 2,520 | | | |
| Belting and hose, leather. | 1909 | 139 | 4,370 | 100 | 1,264 | 3,006 | 5,638 | 17,457 | 1,502 | 1,861 | 15,623 | 28,692 | 8,069 | 43.7 | 66.6 | |
| | 1904 | 117 | 2,800 | 94 | 614 | 2,092 | 3,220 | 10,785 | 787 | 1,105 | 9,317 | 14,220 | 4,903 | 25.5 | 33.9 | |
| | 1899 | 104 | | | 443 | 1,667 | 2,162 | 7,408 | 485 | 614 | 7,500 | 10,628 | 3,123 | | | |
| Belting and hose, woven and rubber. | 1909 | 46 | 7,304 | 11 | 974 | 6,319 | 20,547 | 24,260 | 1,384 | 2,956 | 14,505 | 24,729 | 10,224 | 43.9 | 39.0 | |
| | 1904 | 39 | 5,019 | 15 | 614 | 4,390 | 13,491 | 15,909 | 984 | 2,057 | 10,787 | 17,791 | 7,004 | 116.8 | 188.4 | |
| | 1899 | 25 | | | 231 | 2,025 | 5,612 | 0,020 | 380 | 982 | 4,528 | 6,886 | 2,368 | | | |
| Bicycles, motorcycles, and parts. | 1909 | 95 | 5,017 | 78 | 502 | 4,437 | 5,932 | 0,780 | 582 | 2,908 | 5,083 | 10,699 | 5,616 | 33.7 | 107.6 | |
| | 1904 | 101 | 3,761 | 81 | 361 | 3,319 | 5,730 | 5,883 | 351 | 1,971 | 2,028 | 5,153 | 2,525 | -81.1 | -83.9 | |
| | 1899 | 312 | | | 2,034 | 17,525 | 19,847 | 29,784 | 1,753 | 8,190 | 16,792 | 31,916 | 15,124 | | | |
| Billiard tables and ma- terials. | 1909 | 54 | 1,776 | 48 | 233 | 1,495 | 2,642 | 4,705 | 352 | 1,011 | 3,369 | 5,878 | 2,509 | 87.8 | 164.4 | |
| | 1904 | 48 | 964 | 52 | 116 | 796 | 631 | 1,618 | 151 | 501 | 937 | 2,223 | 1,286 | 75.7 | 34.9 | |
| | 1899 | 74 | | | 88 | 453 | 277 | 884 | 105 | 278 | 729 | 1,048 | 919 | | | |
| Blacking and cleansing and polishing prepara- tions. | 1909 | 501 | 4,407 | 434 | 1,556 | 2,417 | 3,977 | 7,557 | 1,780 | 1,146 | 6,062 | 14,079 | 7,717 | 35.6 | 60.7 | |
| | 1904 | 294 | 2,786 | 281 | 723 | 1,782 | 2,708 | 4,560 | 774 | 738 | 4,383 | 8,651 | 4,268 | 1.4 | 29.2 | |
| | 1899 | 275 | | | 680 | 1,758 | 1,873 | 3,062 | 713 | 634 | 3,152 | 6,698 | 3,546 | | | |
| Bluing. | 1909 | 82 | 545 | 94 | 138 | 313 | 242 | 556 | 112 | 114 | 404 | 1,074 | 580 | 51.9 | 58.2 | |
| | 1904 | 50 | 300 | 53 | 47 | 206 | 284 | 570 | 45 | 77 | 266 | 679 | 413 | -6.4 | 17.9 | |
| | 1899 | 65 | | | 54 | 220 | 110 | 415 | 41 | 79 | 245 | 576 | 331 | | | |
| Bone, carbon, and lamp black. | 1909 | 27 | 302 | 7 | 67 | 228 | 1,023 | 1,842 | 78 | 149 | 445 | 1,093 | 643 | 14.0 | 68.7 | |
| | 1904 | 25 | 258 | 11 | 47 | 200 | 1,085 | 1,063 | 48 | 105 | 203 | 648 | 445 | 135.3 | 80.0 | |
| | 1899 | 15 | | | 21 | 85 | 365 | 782 | 24 | 46 | 106 | 360 | 254 | | | |
| Boots and shoes, includ- ing out stock and find- ings. | 1909 | 1,918 | 215,923 | 1,838 | 15,788 | 198,297 | 90,302 | 222,324 | 18,029 | 98,463 | 332,738 | 512,798 | 180,060 | 23.7 | 43.4 | |
| | 1904 | 1,895 | 171,940 | 2,128 | 9,518 | 160,294 | 63,098 | 136,802 | 9,412 | 73,072 | 225,288 | 357,688 | 132,400 | 6.0 | 23.3 | |
| | 1899 | 2,253 | | | 8,348 | 151,231 | 55,489 | 110,363 | 8,159 | 61,924 | 191,456 | 290,047 | 98,591 | | | |

¹ Included in "marble and stone" in 1899.

STATES, CITIES, AND INDUSTRIES.

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COMPARATIVE SUMMARY FOR THE UNITED STATES, BY SPECIFIED INDUSTRIES: 1909, 1904, AND 1899—Continued.

[See explanatory notes on the first page of this table.]

| Table 110—Contd. | | Cen- sus. | Num- ber of estab- lish- ments. | PERSONS ENGAGED IN INDUSTRY. | | | | Primary horse- power. | Capital. | Sala- ries. | Wages. | Cost of materials. | Value of products. | Value added by manu- facture (value of products less cost of mate- rials). | PER CENT OF INCREASE. | |
|---|--------|--------------|---|---|-----------------------------|--|---|-----------------------------|----------|----------------|----------|-----------------------|-----------------------|--|----------------------------|-------------------------|
| INDUSTRY. | Total. | | | Pro- pri- etors and firm mem- bers. | Salaried em- ployees. | Wage earn- ers (average number). | Wage earn- ers (average num- ber). | | | | | | | | Value of prod- ucts. | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | Expressed in thousands. |
| Boots and shoes, rubber.. | 1909 | 22 | 18,899 | ..... | 1,287 | 17,612 | 25,903 | \$43,905 | \$1,415 | \$5,544 | \$29,577 | \$49,721 | \$20,144 | -7.3 | -29.0 | |
| | 1904 | 22 | 19,815 | ..... | 822 | 18,991 | 26,084 | 30,442 | 874 | 8,867 | 32,000 | 70,065 | 28,065 | 32.0 | 70.5 | |
| | 1899 | 22 | ..... | 2 | 483 | 14,391 | 25,017 | 33,668 | 597 | 6,427 | 22,653 | 41,090 | 18,407 | ..... | ..... |  |
| Boxes, cigar..... | 1909 | 274 | 6,852 | 301 | 436 | 6,115 | 6,049 | 5,403 | 471 | 2,234 | 4,313 | 8,491 | 4,178 | -2.7 | 9.1 | |
| | 1904 | 297 | 7,036 | 384 | 370 | 6,282 | 5,548 | 4,457 | 333 | 2,120 | 3,810 | 7,786 | 3,976 | 36.3 | 32.9 | |
| | 1899 | 315 | ..... | 216 | 4,609 | 4,274 | 4,274 | 3,288 | 172 | 1,440 | 3,061 | 5,857 | 2,796 | ..... | ..... |  |
| Boxes, fancy and paper.. | 1909 | 949 | 43,568 | 815 | 3,239 | 39,514 | 23,323 | 35,475 | 3,709 | 14,015 | 25,716 | 54,450 | 28,734 | 23.2 | 47.7 | |
| | 1904 | 796 | 35,194 | 786 | 2,326 | 32,082 | 15,117 | 22,691 | 2,813 | 10,208 | 16,686 | 36,867 | 20,181 | 16.0 | 35.9 | |
| | 1899 | 729 | ..... | 1,368 | 27,653 | 9,286 | 14,979 | 1,269 | 8,152 | 11,765 | 27,316 | 15,561 | ..... | ..... | ..... |  |
| Brass and bronze prod- ucts. | 1909 | 1,021 | 45,441 | 828 | 3,995 | 40,618 | 106,120 | 109,319 | 5,540 | 23,677 | 99,228 | 149,989 | 50,761 | 22.5 | 46.5 | |
| | 1904 | 813 | 36,952 | 784 | 3,000 | 33,168 | 69,494 | 77,438 | 3,778 | 17,666 | 65,653 | 102,497 | 36,754 | 22.1 | 15.5 | |
| | 1899 | 695 | ..... | 1,813 | 27,166 | 47,257 | 51,120 | 2,297 | 13,599 | 61,189 | 88,654 | 27,465 | ..... | ..... | ..... |  |
| Bread and other bakery products. | 1909 | 23,926 | 144,322 | 26,982 | 17,124 | 100,216 | 65,298 | 212,910 | 13,764 | 59,351 | 238,094 | 269,865 | 158,891 | 23.3 | 47.2 | |
| | 1904 | 18,226 | 109,673 | 20,037 | 8,358 | 81,278 | 37,241 | 122,353 | 6,273 | 43,172 | 155,989 | 209,783 | 118,594 | 26.0 | 53.7 | |
| | 1899 | 14,836 | ..... | 9,167 | 60,192 | 22,472 | 80,902 | 6,063 | 27,864 | 95,052 | 175,389 | 80,317 | ..... | ..... | ..... |  |
| Brick and tile..... | 1909 | 4,215 | 85,764 | 4,285 | 4,951 | 76,528 | 241,169 | 174,673 | 5,439 | 37,139 | 23,736 | 92,776 | 69,040 | 15.9 | 30.4 | |
| | 1904 | 4,634 | 75,006 | 5,295 | 3,690 | 66,021 | 255,362 | 119,957 | 3,530 | 28,646 | 16,317 | 71,132 | 54,835 | 6.5 | 36.8 | |
| | 1899 | 5,423 | ..... | 2,426 | 61,979 | 176,700 | 82,086 | 2,025 | 21,883 | 11,006 | 51,270 | 49,284 | ..... | ..... | ..... |  |
| Brooms and brushes ¹ | 1909 | 1,282 | 15,143 | 1,451 | 1,539 | 12,153 | 8,800 | 15,982 | 1,061 | 5,404 | 15,576 | 29,126 | 13,550 | 6.4 | 35.0 | |
| | 1904 | 1,316 | 13,958 | 1,551 | 982 | 11,425 | 6,441 | 12,052 | 925 | 4,380 | 10,999 | 21,104 | 10,105 | 10.4 | 14.2 | |
| | 1899 | 1,523 | ..... | 900 | 10,346 | 4,482 | 9,616 | 758 | 3,788 | 9,544 | 18,484 | 8,940 | ..... | ..... | ..... |  |
| Butter, cheese, and con- densed milk. | 1909 | 8,479 | 31,506 | 8,019 | 5,056 | 18,431 | 101,349 | 71,284 | 3,591 | 11,061 | 235,546 | 274,558 | 39,012 | 14.5 | 61.2 | |
| | 1904 | 8,926 | 25,865 | 8,801 | 3,507 | 15,557 | 93,845 | 47,256 | 1,376 | 8,413 | 142,920 | 168,183 | 25,263 | 21.5 | 28.6 | |
| | 1899 | 9,242 | ..... | 2,818 | 12,799 | 88,062 | 36,303 | 912 | 6,146 | 109,841 | 130,783 | 21,942 | ..... | ..... | ..... |  |
| Butter, reworking..... | 1909 | 24 | 418 | 10 | 113 | 295 | 1,471 | 3,543 | 128 | 186 | 7,424 | 8,200 | 776 | -27.6 | 12.8 | |
| | 1904 | 35 | 526 | 32 | 90 | 404 | 1,684 | 1,719 | 85 | 252 | 6,247 | 7,271 | 1,024 | 173.0 | 242.8 | |
| | 1899 | 10 | ..... | 29 | 148 | 631 | 631 | 256 | 30 | 68 | 1,345 | 2,115 | 779 | ..... | ..... |  |
| Buttons..... | 1909 | 444 | 18,004 | 519 | 1,058 | 16,427 | 12,831 | 15,640 | 1,299 | 6,789 | 9,541 | 22,706 | 13,167 | 55.5 | 104.0 | |
| | 1904 | 275 | 11,637 | 302 | 10,567 | 6,982 | 6,982 | 7,784 | 711 | 3,680 | 4,144 | 11,134 | 6,989 | 21.7 | 44.7 | |
| | 1899 | 238 | ..... | 339 | 8,685 | 4,105 | 4,105 | 4,213 | 296 | 2,826 | 2,803 | 7,495 | 4,893 | ..... | ..... |  |
| Calcium lights..... | 1909 | 10 | 26 | 7 | 4 | 15 | 53 | 55 | 4 | 11 | 24 | 52 | 26 | -63.4 | -61.5 | |
| | 1904 | 22 | 85 | 28 | 16 | 41 | 132 | 144 | 12 | 24 | 35 | 135 | 100 | -25.5 | 13.4 | |
| | 1899 | 19 | ..... | 6 | 55 | 80 | 80 | 95 | 6 | 24 | 35 | 119 | 84 | ..... | ..... |  |
| Candles ² | 1909 | 16 | 649 | 7 | 103 | 539 | 799 | 2,959 | 161 | 246 | 2,176 | 3,120 | 954 | -33.9 | -19.5 | |
| | 1904 | 17 | 930 | 25 | 89 | 816 | 931 | 3,004 | 135 | 294 | 2,911 | 3,889 | 978 | ..... | ..... |  |
| Canning and preserving.. | 1909 | 3,767 | 71,972 | 4,244 | 7,760 | 59,968 | 81,179 | 119,307 | 7,864 | 19,082 | 101,823 | 157,101 | 55,278 | 5.3 | 20.4 | |
| | 1904 | 3,168 | 66,022 | 3,450 | 5,628 | 56,944 | 60,831 | 79,246 | 5,231 | 16,336 | 83,147 | 130,466 | 47,319 | -0.1 | 31.2 | |
| | 1899 | 2,570 | ..... | 4,199 | 4,199 | 57,012 | 38,624 | 55,481 | 3,479 | 18,705 | 63,668 | 98,335 | 35,667 | ..... | ..... |  |
| Card cutting and design- ing. | 1909 | 68 | 702 | 79 | 98 | 525 | 269 | 684 | 93 | 238 | 474 | 1,091 | 657 | -24.6 | -4.8 | |
| | 1904 | 60 | 834 | 72 | 66 | 696 | 222 | 488 | 52 | 261 | 478 | 1,093 | 606 | 114.2 | 75.2 | |
| | 1899 | 43 | ..... | 25 | 325 | 219 | 338 | 338 | 22 | 135 | 313 | 618 | 305 | ..... | ..... |  |
| Carpets and rugs, other than rag. | 1909 | 139 | 34,706 | 134 | 1,265 | 33,307 | 38,553 | 75,627 | 2,209 | 15,536 | 29,563 | 71,158 | 31,625 | 6.3 | 15.6 | |
| | 1904 | 139 | 34,393 | 149 | 1,023 | 33,221 | 33,945 | 56,781 | 1,397 | 13,724 | 37,945 | 61,586 | 23,628 | 16.9 | 27.8 | |
| | 1899 | 133 | ..... | 687 | 28,411 | 26,740 | 26,740 | 44,449 | 881 | 11,121 | 27,229 | 48,192 | 20,963 | ..... | ..... |  |
| Carpets, rag..... | 1909 | 428 | 2,688 | 489 | 217 | 1,982 | 2,651 | 1,546 | 182 | 860 | 689 | 2,568 | 1,879 | 14.2 | 31.9 | |
| | 1904 | 363 | 2,331 | 458 | 137 | 1,736 | 1,667 | 1,100 | 87 | 675 | 489 | 1,918 | 1,429 | 31.7 | 9.2 | |
| | 1899 | 805 | ..... | 57 | 1,318 | 599 | 599 | 867 | 30 | 443 | 622 | 1,755 | 1,133 | ..... | ..... |  |
| Carriages and sleds, chil- dren's. | 1909 | 84 | 5,769 | 50 | 419 | 5,300 | 5,281 | 6,883 | 490 | 2,217 | 4,739 | 8,803 | 4,076 | 32.4 | 38.2 | |
| | 1904 | 78 | 4,379 | 52 | 324 | 4,003 | 3,633 | 4,336 | 341 | 1,783 | 2,840 | 6,371 | 3,531 | 46.8 | 48.5 | |
| | 1899 | 77 | ..... | 172 | 2,726 | 2,462 | 2,462 | 2,907 | 159 | 1,090 | 1,996 | 4,280 | 2,294 | ..... | ..... |  |
| Carriages and wagons and materials. | 1909 | 5,492 | 82,944 | 6,213 | 6,803 | 69,928 | 126,032 | 175,474 | 7,960 | 37,595 | 81,051 | 159,893 | 77,942 | -10.2 | 2.8 | |
| | 1904 | 5,688 | 90,751 | 6,575 | 6,294 | 77,882 | 106,159 | 152,345 | 6,581 | 38,363 | 77,528 | 155,869 | 78,341 | 5.5 | 12.7 | |
| | 1899 | 6,792 | ..... | 5,026 | 78,812 | 83,771 | 128,962 | 4,759 | 33,565 | 66,772 | 128,262 | 71,490 | ..... | ..... | ..... |  |
| Cars and general shop con- struction and repairs by steam-railroad compa- nies. | 1909 | 1,145 | 301,273 | 2 | 19,097 | 282,174 | 293,361 | 238,317 | 17,339 | 181,344 | 199,413 | 405,601 | 206,186 | 19.1 | 30.9 | |
| | 1904 | 1,140 | 250,199 | ..... | 13,329 | 236,870 | 167,973 | 146,886 | 11,920 | 142,153 | 151,105 | 309,775 | 158,676 | 36.4 | 42.0 | |
| | 1899 | 1,292 | ..... | 7,094 | 178,595 | 95,087 | 119,473 | 6,208 | 96,007 | 109,472 | 218,114 | 208,642 | ..... | ..... | ..... |  |
| Cars and general shop con- struction and repairs by street-railroad compa- nies. | 1909 | 541 | 23,669 | ..... | 1,281 | 22,418 | 35,794 | 38,899 | 1,204 | 14,486 | 15,168 | 31,963 | 16,795 | 102.8 | 137.9 | |
| | 1904 | 86 | 11,551 | ..... | 499 | 11,052 | 3,154 | 12,906 | 543 | 5,463 | 13,457 | 7,974 | 5,483 | 57.3 | 43.4 | |
| | 1899 | 108 | ..... | 201 | 7,025 | 6,443 | 6,443 | 10,782 | 194 | 4,406 | 4,327 | 9,371 | 5,034 | ..... | ..... |  |
| Cars, steam-railroad, not including operations of railroad companies. | 1909 | 110 | 47,094 | 7 | 4,001 | 43,086 | 97,797 | 139,805 | 5,138 | 27,135 | 78,753 | 123,730 | 44,977 | 26.5 | 11.3 | |
| | 1904 | 73 | 36,367 | 6 | 2,303 | 34,068 | 55,994 | 88,179 | 2,855 | 20,248 | 75,657 | 111,175 | 35,518 | 1.8 | 22.8 | |
| | 1899 | 65 | ..... | 1,366 | 33,453 | 33,395 | 33,395 | 88,324 | 1,538 | 16,967 | 61,743 | 90,510 | 28,767 | ..... | ..... |  |
| Cars, street-railroad, not including operations of railroad companies. | 1909 | 14 | 4,005 | 1 | 421 | 3,583 | 15,161 | 14,168 | 594 | 2,177 | 4,260 | 7,810 | 3,550 | -24.2 | -28.0 | |
| | 1904 | 14 | 4,997 | 3 | 264 | 4,730 | 7,054 | 12,976 | 398 | 2,840 | 5,341 | 10,444 | 5,103 | 31.9 | 48.4 | |
| | 1899 | 20 | ..... | 144 | 3,585 | 4,865 | 4,865 | 7,615 | 235 | 1,951 | 3,967 | 7,305 | 3,338 | ..... | ..... |  |
| Cash registers and calcul- ating machines. | 1909 | 50 | 9,249 | 7 | 1,777 | 7,465 | 6,944 | 27,224 | 2,736 | 5,312 | 3,552 | 23,708 | 20,156 | 83.0 | 140.1 | |
| | 1904 | 32 | 5,012 | 10 | 923 | 4,079 | 4,139 | 7,588 | 1,109 | 2,442 | 1,516 | 9,875 | 8,359 | 97.3 | | |

¹ Includes 898 establishments reported as "brooms" and 384 as "brushes" in 1909.² Included in "soap

COMPARATIVE SUMMARY FOR THE UNITED STATES, BY SPECIFIED INDUSTRIES: 1909, 1904, AND 1899—Continued.

[See explanatory notes on the first page of this table.]

| Table 110—Contd. | | | | | | | | | | | | | | | |
|---|--------------|---|------------------------------|---|-----------------------------|---|-----------------------------|-----------|----------------|----------|-----------------------|-----------------------|--|---|-------------------------------|
| INDUSTRY. | Cen- sus. | Num- ber of estab- lish- ments. | PERSONS ENGAGED IN INDUSTRY. | | | | Primary horse- power. | Capital. | Sala- ries. | Wages. | Cost of materials. | Value of products. | Value added by manu- facture (value of products less cost of mate- rials). | PER CENT OF INCREASE. | |
| | | | Total. | Pro- pri- etors and firm mem- bers. | Salaried em- ployees. | Wage earners (average number). | | | | | | | | Wage earners (aver- age num- ber). | Value of prod- ucts. |
| | | | | | | | | | | | | | | | |
| Chemicals ¹ | 1909 | 349 | 27,791 | 154 | 3,923 | 23,714 | 208,004 | \$155,144 | \$0,137 | \$14,085 | \$04,122 | \$117,089 | \$53,567 | 19.7 | 56.5 |
| | 1904 | 275 | 22,707 | 123 | 2,778 | 19,806 | 132,202 | 96,021 | 4,048 | 10,790 | 42,003 | 75,222 | 33,159 | 4.1 | 20.1 |
| | 1899 | 433 | ..... | ..... | 2,123 | 19,020 | 90,340 | 89,009 | 2,023 | 9,393 | 34,546 | 02,637 | 28,091 | ..... | ..... |
| China decorating..... | 1909 | 40 | 436 | 45 | 63 | 328 | 18 | 559 | 80 | 191 | 311 | 786 | 475 | 45.8 | 140.4 |
| | 1904 | 28 | 273 | 30 | 18 | 225 | 6 | 261 | 10 | 99 | 108 | 327 | 219 | -24.5 | -32.6 |
| | 1899 | 40 | ..... | ..... | 31 | 208 | ..... | 209 | 21 | 122 | 207 | 485 | 278 | ..... | ..... |
| Chocolate and cocoa products. | 1909 | 27 | 3,404 | 10 | 508 | 2,826 | 10,593 | 13,085 | 970 | 1,209 | 15,523 | 22,390 | 6,867 | 35.2 | 55.6 |
| | 1904 | 25 | 2,396 | 15 | 291 | 2,090 | 5,217 | 8,370 | 493 | 9,723 | 14,390 | 4,607 | 4,607 | 59.1 | 48.9 |
| | 1899 | 24 | ..... | ..... | 289 | 1,314 | 2,766 | 0,891 | 371 | 520 | 6,877 | 9,066 | 2,789 | ..... | ..... |
| Clocks and watches, in- cluding cases and mate- rials. | 1909 | 120 | 25,430 | 53 | 1,529 | 23,857 | 14,057 | 57,500 | 2,181 | 12,044 | 11,131 | 35,197 | 24,066 | 5.7 | 18.2 |
| | 1904 | 97 | 23,891 | 63 | 1,249 | 22,570 | 10,731 | 42,189 | 1,638 | 11,892 | 9,872 | 29,790 | 19,918 | 31.6 | 34.7 |
| | 1899 | 109 | ..... | ..... | 676 | 17,155 | 7,251 | 31,514 | 957 | 8,315 | 8,810 | 22,110 | 13,291 | ..... | ..... |
| Cloth, sponging and re- finishing. | 1909 | 57 | 1,167 | 67 | 125 | 975 | 704 | 629 | 127 | 651 | 85 | 1,544 | 1,459 | 22.6 | 46.6 |
| | 1904 | 55 | 922 | 68 | 59 | 795 | 322 | 401 | 02 | 504 | 30 | 1,053 | 1,014 | 48.9 | 88.0 |
| | 1899 | 46 | ..... | ..... | 39 | 534 | 100 | 289 | 35 | 208 | 17 | 566 | 549 | ..... | ..... |
| Clothing, horse..... | 1909 | 33 | 1,830 | 40 | 142 | 1,648 | 1,454 | 3,270 | 171 | 492 | 2,773 | 4,135 | 1,302 | 55.0 | 93.2 |
| | 1904 | 20 | 1,168 | 32 | 73 | 1,003 | 656 | 1,490 | 72 | 342 | 1,329 | 2,140 | 811 | 84.0 | 64.0 |
| | 1899 | 26 | ..... | ..... | 55 | 575 | 271 | 654 | 47 | 177 | 848 | 1,305 | 457 | ..... | ..... |
| Clothing, men's, button- holes. | 1909 | 146 | 1,031 | 181 | 20 | 830 | 170 | 225 | 12 | 389 | 105 | 781 | 676 | -8.1 | 11.6 |
| | 1904 | 141 | 1,075 | 164 | 8 | 903 | 137 | 262 | 5 | 380 | 95 | 700 | 605 | -4.3 | 2.8 |
| | 1899 | 149 | ..... | ..... | 11 | 944 | 113 | 247 | 6 | 332 | 98 | 681 | 583 | ..... | ..... |
| Clothing, men's, includ- ing shirts. | 1909 | 6,354 | 271,437 | 8,502 | 23,239 | 239,695 | 42,725 | 275,320 | 26,723 | 100,277 | 297,515 | 568,077 | 270,562 | 38.0 | 39.7 |
| | 1904 | 5,145 | 196,306 | 7,006 | 15,671 | 173,089 | 29,829 | 176,557 | 15,740 | 68,459 | 211,433 | 406,708 | 195,335 | 10.2 | 25.6 |
| | 1899 | 6,419 | ..... | ..... | 11,906 | 157,540 | 20,467 | 140,191 | 12,032 | 56,391 | 168,160 | 323,830 | 155,070 | ..... | ..... |
| Clothing, women's..... | 1909 | 4,558 | 179,021 | 6,482 | 18,796 | 153,743 | 22,294 | 120,301 | 20,418 | 78,568 | 208,788 | 384,752 | 175,064 | 32.9 | 55.4 |
| | 1904 | 3,351 | 131,538 | 4,913 | 10,920 | 115,705 | 14,610 | 73,948 | 9,976 | 51,180 | 130,720 | 247,062 | 116,942 | 38.2 | 55.4 |
| | 1899 | 2,701 | ..... | ..... | 6,715 | 88,739 | 9,962 | 48,432 | 6,574 | 32,580 | 84,705 | 159,340 | 74,035 | ..... | ..... |
| Coffee and spice, roasting and grinding. ² | 1909 | 607 | 13,516 | 497 | 5,529 | 7,490 | 22,334 | 46,042 | 6,596 | 3,676 | 83,205 | 110,533 | 27,328 | 25.7 | 31.3 |
| | 1904 | 421 | 9,245 | 442 | 2,844 | 5,959 | 15,703 | 38,735 | 3,216 | 2,830 | 65,847 | 84,188 | 18,341 | -6.7 | 21.1 |
| | 1899 | 458 | ..... | ..... | 2,749 | 6,387 | 10,270 | 28,437 | 2,051 | 2,487 | 55,112 | 69,627 | 14,415 | ..... | ..... |
| Coffins, burial cases, and undertakers' goods. | 1909 | 284 | 11,448 | 161 | 1,948 | 9,339 | 16,490 | 25,843 | 2,411 | 4,033 | 11,064 | 24,520 | 12,562 | 10.3 | 21.0 |
| | 1904 | 239 | 9,797 | 108 | 1,161 | 8,468 | 13,178 | 18,532 | 1,345 | 4,120 | 9,501 | 20,206 | 10,765 | 23.8 | 45.3 |
| | 1899 | 217 | ..... | ..... | 948 | 6,840 | 8,927 | 13,585 | 1,023 | 3,077 | 6,945 | 13,952 | 7,007 | ..... | ..... |
| Coke..... | 1909 | 315 | 31,220 | 101 | 1,852 | 29,273 | 62,602 | 152,321 | 2,072 | 15,454 | 64,025 | 95,697 | 31,672 | 54.2 | 85.0 |
| | 1904 | 278 | 20,440 | 73 | 1,386 | 18,981 | 66,609 | 60,713 | 1,247 | 9,304 | 29,885 | 51,729 | 21,844 | 11.7 | 45.4 |
| | 1899 | 241 | ..... | ..... | 915 | 16,999 | 34,797 | 30,503 | 797 | 7,080 | 19,666 | 35,585 | 15,919 | ..... | ..... |
| Confectionery..... | 1909 | 1,944 | 54,854 | 1,832 | 8,384 | 44,038 | 35,870 | 68,326 | 9,137 | 15,615 | 81,151 | 134,796 | 53,645 | 23.2 | 54.8 |
| | 1904 | 1,348 | 42,720 | 1,366 | 5,124 | 36,239 | 24,292 | 43,125 | 4,840 | 11,009 | 48,810 | 87,087 | 38,277 | 34.9 | 43.6 |
| | 1899 | 962 | ..... | ..... | 4,304 | 26,866 | 19,410 | 26,310 | 3,525 | 8,020 | 35,354 | 60,644 | 25,290 | ..... | ..... |
| Cooperage and wooden goods, not elsewhere specified. | 1909 | 1,603 | 29,717 | 1,760 | 1,688 | 20,269 | 65,108 | 50,342 | 2,047 | 11,715 | 36,928 | 60,248 | 23,320 | -5.3 | 4.0 |
| | 1904 | 1,719 | 31,133 | 1,853 | 1,537 | 27,743 | 50,988 | 30,756 | 1,752 | 11,843 | 34,971 | 57,956 | 22,985 | 9.6 | 37.9 |
| | 1899 | 1,798 | ..... | ..... | 960 | 25,323 | 38,402 | 25,002 | 963 | 9,800 | 23,010 | 42,025 | 18,406 | ..... | ..... |
| Copper, tin, and sheet- iron products. | 1909 | 4,223 | 86,934 | 4,423 | 8,896 | 73,015 | 62,366 | 217,532 | 10,288 | 39,501 | 112,582 | 199,824 | 87,242 | 38.8 | 66.6 |
| | 1904 | 2,640 | 60,713 | 2,851 | 4,827 | 53,035 | 30,229 | 147,608 | 0,070 | 26,269 | 63,921 | 119,933 | 50,012 | 38.4 | 53.1 |
| | 1899 | 1,985 | ..... | ..... | 2,924 | 38,317 | 28,829 | 40,670 | 2,810 | 16,924 | 42,002 | 78,359 | 35,757 | ..... | ..... |
| Cordage and twine and jute and linen goods. | 1909 | 164 | 27,214 | 80 | 1,314 | 25,820 | 78,540 | 76,020 | 1,863 | 9,133 | 40,915 | 01,020 | 20,105 | 1.9 | -5.6 |
| | 1904 | 145 | 26,442 | 60 | 1,050 | 25,332 | 60,244 | 56,467 | 1,597 | 8,824 | 46,031 | 04,664 | 18,633 | 17.0 | 31.8 |
| | 1899 | 160 | ..... | ..... | 682 | 21,651 | 47,999 | 43,163 | 1,021 | 6,554 | 33,004 | 40,078 | 16,014 | ..... | ..... |
| Cordials and sirups..... | 1909 | 117 | 1,638 | 94 | 449 | 1,095 | 1,154 | 4,804 | 627 | 503 | 5,341 | 9,662 | 4,321 | 65.9 | 175.3 |
| | 1904 | 63 | 899 | 68 | 171 | 660 | 782 | 1,066 | 242 | 235 | 2,149 | 3,510 | 1,361 | 82.3 | 66.6 |
| | 1899 | 39 | ..... | ..... | 112 | 302 | 573 | 1,153 | 121 | 117 | 1,505 | 2,107 | 602 | ..... | ..... |
| Cork, cutting..... | 1909 | 62 | 3,376 | 49 | 185 | 3,142 | 3,746 | 5,327 | 207 | 1,098 | 3,435 | 5,940 | 2,505 | 8.5 | 32.3 |
| | 1904 | 50 | 3,080 | 40 | 136 | 2,895 | 2,589 | 4,009 | 198 | 888 | 2,459 | 4,491 | 2,032 | 23.7 | 2.3 |
| | 1899 | 62 | ..... | ..... | 136 | 2,340 | 1,503 | 2,084 | 195 | 688 | 2,404 | 4,392 | 1,988 | ..... | ..... |
| Corsets..... | 1909 | 138 | 19,611 | 91 | 1,956 | 17,504 | 4,581 | 18,033 | 2,871 | 0,464 | 15,040 | 33,257 | 17,617 | 60.0 | 123.8 |
| | 1904 | 109 | 11,948 | 96 | 877 | 10,975 | 3,284 | 9,589 | 1,010 | 3,600 | 6,135 | 14,862 | 8,727 | -10.8 | 2.8 |
| | 1899 | 138 | ..... | ..... | 815 | 12,297 | 3,038 | 7,290 | 960 | 3,045 | 0,367 | 14,451 | 8,094 | ..... | ..... |
| Cotton goods, including cotton small wares. | 1909 | 1,324 | 387,771 | 377 | 8,514 | 378,880 | 1,206,517 | 822,238 | 14,412 | 132,859 | 371,009 | 928,392 | 257,383 | 19.9 | 39.5 |
| | 1904 | 1,154 | 323,287 | 432 | 6,981 | 315,874 | 986,604 | 613,111 | 10,238 | 90,206 | 286,255 | 450,468 | 164,213 | 4.3 | 32.8 |
| | 1899 | 1,055 | ..... | ..... | 4,902 | 302,861 | 795,834 | 467,240 | 7,350 | 86,090 | 170,552 | 339,200 | 162,648 | ..... | ..... |
| Crucibles..... | 1909 | 12 | 308 | 4 | 59 | 335 | 816 | 2,051 | 130 | 180 | 1,080 | 1,849 | 760 | 19.6 | 37.7 |
| | 1904 | 11 | 340 | 3 | 57 | 280 | 627 | 1,577 | 116 | 159 | 702 | 1,343 | 581 | -53.3 | -48.5 |
| | 1899 | 11 | ..... | ..... | 89 | 671 | 760 | 1,844 | 154 | 251 | 1,073 | 2,607 | 934 | ..... | ..... |
| Cutlery and tools, not elsewhere specified. | 1909 | 959 | 37,161 | 814 | 3,351 | 32,996 | 68,294 | 67,380 | 4,182 | 17,581 | 18,279 | 53,266 | 34,987 | 26.0 | 36.5 |
| | 1904 | 838 | 29,004 | 827 | 1,989 | 26,188 | 54,397 | 43,729 | 2,333 | 13,125 | 13,278 | 30,022 | 25,744 | 33.3 | 38.6 |
| | 1899 | 721 | ..... | ..... | 1,464 | 19,642 | 38,283 | 30,152 | 1,606 | 9,434 | 0,748 | 28,146 | 18,393 | ..... | ..... |
| Dairymen's, poulterers', and apiarists' supplies. ³ | 1909 | 233 | 6,431 | 206 | 1,354 | 4,871 | 6,898 | 15,188 | 1,416 | 2,671 | 6,089 | 15,463 | 9,374 | 86.8 | 136.3 |
| | 1904 | 176 | 3,273 | 165 | 500 | 2,608 | 3,094 | 5,030 | 359 | 1,167 | 3,203 | 6,545 | 3,342 | ..... | ..... |
| Dentists' materials..... | 1909 | 87 | 1,982 | 69 | 340 | 1,573 | 865 | 6,258 | 545 | 744 | 8,101 | 10,836 | 2,735 | -18.2 | 33.7 |
| | 1904 | 80 | 2,291 | 79 | 290 | 1,922 | 1,113 | 4,681 | 334 | | | | | | |

¹ Includes "sulphuric, nitric, and mixed acids" and "wood distillation, not including turpentine and rosin" in 1899.² Includes "peanuts, grading, roasting, cleaning, and shelling" in 1899.³ Included in other classifications in 1899.

STATES, CITIES, AND INDUSTRIES.

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COMPARATIVE SUMMARY FOR THE UNITED STATES, BY SPECIFIED INDUSTRIES: 1909, 1904, AND 1899—Continued.

[See explanatory notes on the first page of this table.]

| Table 110—Contd. | | | | | | | | | | | | | | | | |
|---|--------------|---|------------------------------|---|-----------------------------|---|--|-----------------------------|----------|----------------|---------|-----------------------|-----------------------|--|----------------------------|--|
| INDUSTRY. | Cen- sus. | Num- ber of estab- lish- ments. | PERSONS ENGAGED IN INDUSTRY. | | | | | Primary horse- power. | Capital. | Sala- ries. | Wages. | Cost of materials. | Value of products. | Value added by manu- facture (value of products less cost of mate- rials). | PER CENT OF INCREASE. | |
| | | | Total. | Pro- pri- etors and firm mem- bers. | Salaried em- ployees. | Wage earners (average number). | Wage earners (average num- ber). | | | | | | | | Value of prod- ucts. | |
| | | | | | | | | | | | | | | | | |
| Expressed in thousands. | | | | | | | | | | | | | | | | |
| Drug grinding..... | 1909 | 25 | 1,152 | 16 | 214 | 922 | 3,322 | \$5,187 | \$268 | \$464 | \$3,454 | \$6,007 | \$2,553 | -6.0 | 16.7 | |
| | 1904 | 27 | 1,111 | 23 | 107 | 951 | 2,866 | 4,991 | 155 | 483 | 3,024 | 5,146 | 2,122 | 52.3 | 19.5 | |
| | 1899 | 26 | | | 102 | 644 | 4,697 | 2,835 | 127 | 292 | 3,315 | 4,308 | 893 | | | |
| Dyeing and finishing tex- tiles. | 1909 | 426 | 47,303 | 313 | 2,939 | 44,046 | 107,746 | 114,093 | 5,035 | 21,227 | 35,261 | 83,556 | 48,295 | 28.8 | 64.3 | |
| | 1904 | 360 | 38,071 | 310 | 2,196 | 35,565 | 84,868 | 88,709 | 3,407 | 15,469 | 19,621 | 50,850 | 31,229 | 19.4 | 13.1 | |
| | 1899 | 298 | | | 1,313 | 29,776 | 69,238 | 60,643 | 2,267 | 12,726 | 17,958 | 44,963 | 27,005 | | | |
| Dyestuffs and extracts... | 1909 | 107 | 3,015 | 65 | 553 | 2,397 | 22,213 | 17,935 | 942 | 1,291 | 9,684 | 15,965 | 6,271 | -11.5 | 46.5 | |
| | 1904 | 98 | 3,150 | 82 | 361 | 2,707 | 17,671 | 14,904 | 609 | 1,264 | 6,829 | 10,893 | 4,064 | 64.4 | 48.2 | |
| | 1899 | 77 | | | 229 | 1,647 | 11,499 | 7,859 | 312 | 788 | 4,746 | 7,381 | 2,605 | | | |
| Electrical machinery, ap- paratus, and supplies. | 1909 | 1,009 | 105,600 | 439 | 17,905 | 87,256 | 158,763 | 267,844 | 20,193 | 49,381 | 108,566 | 221,309 | 112,743 | 44.3 | 57.2 | |
| | 1904 | 784 | 71,485 | 400 | 10,619 | 60,466 | 105,376 | 174,066 | 11,061 | 31,842 | 66,837 | 140,808 | 73,972 | 43.9 | 52.3 | |
| | 1899 | 581 | | | 5,067 | 42,013 | 43,674 | 83,660 | 4,632 | 20,579 | 49,458 | 82,494 | 42,976 | | | |
| Electroplating..... | 1909 | 461 | 3,558 | 554 | 287 | 2,717 | 4,461 | 2,324 | 243 | 1,652 | 1,205 | 4,540 | 3,305 | 39.8 | 52.1 | |
| | 1904 | 312 | 2,458 | 371 | 144 | 1,943 | 2,588 | 1,287 | 132 | 1,069 | 747 | 2,965 | 2,218 | -6.9 | 9.0 | |
| | 1899 | 302 | | | 115 | 2,086 | 2,933 | 1,322 | 93 | 949 | 784 | 2,720 | 1,936 | | | |
| Emery and other abrasive wheels. | 1909 | 51 | 2,446 | 20 | 483 | 1,943 | 4,005 | 6,231 | 657 | 1,156 | 2,651 | 6,771 | 4,090 | 142.6 | 235.5 | |
| | 1904 | 34 | 1,000 | 11 | 188 | 801 | 1,965 | 2,249 | 217 | 451 | 766 | 2,062 | 1,357 | 46.7 | 49.2 | |
| | 1899 | 34 | | | 125 | 546 | 1,044 | 1,490 | 127 | 303 | 509 | 1,383 | 873 | | | |
| Enameling and japan- ning. ¹ | 1909 | 108 | 2,418 | 105 | 188 | 2,125 | 1,695 | 2,880 | 204 | 922 | 1,466 | 3,316 | 1,820 | -78.7 | -79.7 | |
| | 1904 | 124 | 10,657 | 99 | 585 | 9,963 | 7,856 | 18,571 | 814 | 3,830 | 7,394 | 16,316 | 8,922 | 27.2 | 69.1 | |
| | 1899 | 167 | | | 307 | 7,835 | 3,052 | 9,302 | 309 | 2,334 | 5,522 | 10,194 | 4,672 | | | |
| Engravers' materials..... | 1909 | 18 | 189 | 13 | 47 | 129 | 549 | 393 | 68 | 96 | 609 | 921 | 312 | 163.3 | 428.6 | |
| | 1904 | 10 | 68 | 13 | 6 | 49 | 135 | 98 | 11 | 31 | 96 | 171 | 75 | -35.5 | -39.4 | |
| | 1899 | 11 | | | 13 | 76 | 105 | 101 | 22 | 45 | 142 | 282 | 149 | | | |
| Engraving and diesinking | 1909 | 253 | 1,782 | 300 | 174 | 1,308 | 768 | 1,449 | 168 | 821 | 351 | 2,250 | 1,899 | -24.8 | -7.1 | |
| | 1904 | 305 | 2,100 | 352 | 175 | 1,573 | 1,632 | 1,211 | 160 | 1,092 | 376 | 2,432 | 2,048 | 63.2 | 65.0 | |
| | 1899 | 277 | | | 75 | 964 | 616 | 720 | 63 | 543 | 263 | 1,468 | 1,265 | | | |
| Engraving, wood..... | 1909 | 82 | 480 | 89 | 73 | 318 | 39 | 193 | 82 | 299 | 126 | 711 | 565 | -5.9 | 9.7 | |
| | 1904 | 114 | 505 | 129 | 38 | 338 | 45 | 185 | 42 | 245 | 66 | 648 | 588 | 9.6 | 5.5 | |
| | 1899 | 144 | | | 22 | 336 | 47 | 231 | 23 | 206 | 63 | 614 | 551 | | | |
| Explosives..... | 1909 | 86 | 7,058 | 21 | 763 | 6,274 | 28,601 | 50,168 | 1,134 | 4,304 | 22,812 | 40,140 | 17,328 | 8.2 | 35.6 | |
| | 1904 | 124 | 7,113 | 24 | 1,289 | 5,800 | 29,665 | 42,307 | 1,797 | 3,309 | 17,204 | 29,603 | 12,399 | 28.8 | 72.9 | |
| | 1899 | 97 | | | 768 | 4,502 | 19,195 | 19,466 | 914 | 2,384 | 10,335 | 17,125 | 6,790 | | | |
| Fancy articles, not else- where specified. | 1909 | 494 | 14,194 | 477 | 1,526 | 12,191 | 8,310 | 15,768 | 1,728 | 5,096 | 10,361 | 22,682 | 12,271 | 19.5 | 28.6 | |
| | 1904 | 435 | 11,748 | 483 | 1,066 | 10,199 | 5,856 | 9,501 | 1,037 | 4,680 | 7,537 | 16,594 | 10,057 | 20.7 | 36.4 | |
| | 1899 | 496 | | | 875 | 8,451 | 4,386 | 6,854 | 739 | 3,023 | 5,943 | 12,896 | 6,953 | | | |
| Fertilizers..... | 1909 | 550 | 21,950 | 323 | 3,317 | 18,310 | 64,711 | 121,537 | 4,406 | 7,477 | 69,522 | 103,960 | 34,438 | 29.1 | 83.9 | |
| | 1904 | 399 | 16,091 | 294 | 1,613 | 14,184 | 47,989 | 68,917 | 1,934 | 5,127 | 39,288 | 56,541 | 17,253 | 22.5 | 26.6 | |
| | 1899 | 422 | | | 1,712 | 11,581 | 38,680 | 60,686 | 2,125 | 4,185 | 28,958 | 44,657 | 15,699 | | | |
| Files..... | 1909 | 67 | 4,521 | 47 | 316 | 4,158 | 7,383 | 10,413 | 338 | 1,978 | 1,596 | 5,691 | 4,095 | 26.9 | 29.6 | |
| | 1904 | 62 | 3,450 | 65 | 109 | 3,276 | 5,697 | 5,866 | 170 | 1,514 | 1,311 | 4,392 | 3,081 | 3.7 | 29.0 | |
| | 1899 | 86 | | | 127 | 3,160 | 4,835 | 3,858 | 154 | 1,277 | 1,106 | 3,404 | 2,238 | | | |
| Firearms and ammuni- tion. | 1909 | 66 | 16,042 | 30 | 1,297 | 14,715 | 17,840 | 39,377 | 1,920 | 8,427 | 17,021 | 34,112 | 17,091 | 7.9 | 26.9 | |
| | 1904 | 62 | 14,400 | 38 | 728 | 13,634 | 21,408 | 22,493 | 1,109 | 7,755 | 12,339 | 28,206 | 15,867 | 40.4 | 52.7 | |
| | 1899 | 65 | | | 432 | 9,713 | 7,470 | 13,635 | 614 | 5,103 | 8,742 | 18,472 | 9,730 | | | |
| Fire extinguishers, chem- ical. | 1909 | 31 | 300 | 10 | 95 | 195 | 215 | 527 | 134 | 127 | 305 | 754 | 449 | 9.6 | 29.6 | |
| | 1904 | 35 | 267 | 23 | 66 | 178 | 140 | 338 | 59 | 108 | 229 | 582 | 353 | 178.1 | 167.0 | |
| | 1899 | 17 | | | 47 | 64 | 26 | 137 | 39 | 23 | 71 | 218 | 147 | | | |
| Fireworks..... | 1909 | 42 | 1,567 | 22 | 142 | 1,403 | 517 | 2,209 | 217 | 579 | 806 | 2,269 | 1,573 | -5.2 | 14.2 | |
| | 1904 | 34 | 1,637 | 25 | 132 | 1,480 | 347 | 1,543 | 141 | 536 | 769 | 1,887 | 1,218 | -9.6 | 11.3 | |
| | 1899 | 46 | | | 136 | 1,638 | 219 | 1,086 | 146 | 507 | 628 | 1,785 | 1,157 | | | |
| Flags, banners, regalia, society badges, and em- blems. | 1909 | 211 | 4,522 | 207 | 743 | 3,572 | 1,173 | 5,781 | 710 | 1,489 | 3,810 | 8,114 | 4,304 | 24.4 | 44.7 | |
| | 1904 | 171 | 3,517 | 169 | 476 | 2,872 | 949 | 3,916 | 482 | 1,128 | 2,506 | 5,608 | 3,102 | 38.2 | 37.2 | |
| | 1899 | 145 | | | 306 | 2,078 | 435 | 2,406 | 259 | 620 | 2,144 | 4,093 | 1,944 | | | |
| Flavoring extracts..... | 1909 | 420 | 2,634 | 377 | 1,028 | 1,229 | 1,060 | 5,341 | 1,082 | 558 | 4,458 | 8,828 | 4,370 | -20.4 | 13.6 | |
| | 1904 | 377 | 2,599 | 384 | 672 | 1,543 | 873 | 4,405 | 698 | 653 | 3,996 | 7,772 | 3,776 | 23.3 | 23.2 | |
| | 1899 | 350 | | | 594 | 1,251 | 704 | 3,314 | 654 | 478 | 3,291 | 6,308 | 3,017 | | | |
| Flax and hemp, dressed.. | 1909 | 16 | 216 | 22 | 30 | 164 | 1,147 | 785 | 29 | 64 | 336 | 467 | 131 | -23.4 | 34.6 | |
| | 1904 | 17 | 246 | 17 | 15 | 214 | 600 | 239 | 9 | 60 | 233 | 347 | 114 | 1.4 | 118.2 | |
| | 1899 | 4 | | | 12 | 211 | 187 | 72 | 7 | 46 | 91 | 159 | 68 | | | |
| Flour-mill and gristmill products. | 1909 | 11,691 | 66,054 | 14,570 | 12,031 | 39,453 | 853,584 | 349,182 | 12,517 | 21,494 | 767,576 | 883,584 | 116,008 | 9.9 | 23.9 | |
| | 1904 | 10,051 | 59,623 | 13,098 | 7,415 | 39,110 | 775,318 | 265,117 | 7,332 | 19,822 | 619,917 | 713,033 | 93,082 | 21.4 | 42.2 | |
| | 1899 | 9,476 | | | 5,522 | 32,226 | 670,719 | 189,281 | 5,258 | 16,285 | 428,111 | 501,396 | 73,279 | | | |
| Food preparations..... | 1909 | 1,213 | 20,965 | 1,131 | 4,866 | 14,968 | 55,166 | 64,685 | 5,855 | 7,043 | 83,942 | 125,311 | 41,369 | 32.1 | 104.9 | |
| | 1904 | 766 | 14,739 | 749 | 2,657 | 11,333 | 28,162 | 51,784 | 2,999 | 4,398 | 37,668 | 61,180 | 23,512 | 28.0 | 53.6 | |
| | 1899 | 645 | | | 1,538 | 8,214 | 15,485 | 21,401 | 1,495 | 3,699 | 24,777 | 39,337 | 15,060 | | | |
| Foundry and machine- shop products. ² | 1909 | 13,253 | 615,485 | 9,851 | 74,623 | 531,011 | 869,305 | 1,514,332 | 93,795 | 321,521 | 540,611 | 1,228,475 | 688,464 | 19.8 | 20.5 | |
| | 1904 | 10,765 | 502,185 | 9,370 | 49,406 | 443,409 | 606,165 | 1,034,135 | 59,703 | 246,573 | 367,412 | 880,514 | 519,102 | 3.8 | 16.3 | |
| | 1899 | 11,046 | | | 34,286 | 426,985 | 443,085 | 790,741 | 39,318 | 219,879 | 363,976 | 795,454 | 435,418 | | | |
| Foundry supplies..... | 1909 | 49 | 710 | 27 | 219 | 464 | 2,688 | 2,688 | 255 | 276 | 1,272 | 2,298 | 1,026 | 47.3 | 117.0 | |
| | 1904 | 34 | 414 | 22 | 77 | 315 | 3,543 | 1,516 | 73 | 166 | 625 | 1,059 | 494 | 13.3 | -6.2 | |
| | 1899 | 30 | | | 75 | 278 | 3,505 | 982 | 79 | 136 | 608 | 1,129 | 561 | | | |
| Fuel, manufactured ³ | 1909 | 11 | 112 | 2 | 22 | 88 | 1,290 | 432 | 22 | 50 | 155 | 311 | 156 | | | |

¹ Totals for 1899 and 1904 include some establishments classed as "copper, tin, and sheet-iron products," in 1909.² Includes "locomotives, not made by railroad companies," and "stoves and furnaces, not including gas and oil stoves," in 1899.³ None reported in 1904 or 1899.

COMPARATIVE SUMMARY FOR THE UNITED STATES, BY SPECIFIED INDUSTRIES: 1909, 1904, AND 1899—Continued.

[See explanatory notes on the first page of this table.]

| Table 110—Contd. | INDUSTRY. | Cen- sus. | Num- ber of estab- lish- ments. | PERSONS ENGAGED IN INDUSTRY. | | | | Primary horse- power. | Capital. | Sala- ries. | Wages. | Cost of materials. | Value of products. | Value added by manu- facture (value of products less cost of mate- rials). | PER CENT OF INCREASE. | |
|--|-----------|--------------|---|------------------------------|---|-----------------------------|---|-----------------------------|----------|----------------|----------|-----------------------|-----------------------|--|---|----------------------------|
| | | | | Total. | Pro- pri- etors and firm mem- bers. | Salaried em- ployees. | Wage earners (average number). | | | | | | | | Wage earners (aver- age num- ber). | Value of prod- ucts. |
| | | | | | | | | | | | | | | | | |
| Expressed in thousands. | | | | | | | | | | | | | | | | |
| Fur goods..... | 1909 | 1,241 | 16,152 | 1,717 | 2,508 | 11,027 | 2,120 | \$20,249 | \$2,553 | \$7,788 | \$31,777 | \$55,038 | \$24,161 | 27.3 | 50.7 | |
| | 1904 | 867 | 11,787 | 1,245 | 1,172 | 9,370 | 1,694 | 17,990 | 1,220 | 5,123 | 21,202 | 37,110 | 15,917 | 20.8 | 43.3 | |
| | 1899 | 734 | ..... | ..... | 1,141 | 7,758 | 907 | 12,484 | 1,006 | 3,927 | 14,281 | 25,899 | 11,618 | ..... | ..... |  |
| Furnishing goods, men's. | 1909 | 900 | 43,935 | 1,022 | 4,431 | 38,482 | 12,116 | 49,000 | 5,210 | 15,093 | 49,125 | 87,710 | 38,585 | 41.6 | 78.9 | |
| | 1904 | 547 | 30,476 | 694 | 2,597 | 27,185 | 5,421 | 28,044 | 2,158 | 8,700 | 26,565 | 49,032 | 22,407 | -10.3 | 10.6 | |
| | 1899 | 457 | ..... | ..... | 2,149 | 30,322 | 3,552 | 20,570 | 2,188 | 9,730 | 23,670 | 44,346 | 20,670 | ..... | ..... |  |
| Furniture and refriger- ators. | 1909 | 3,155 | 144,140 | 2,657 | 13,031 | 128,452 | 221,451 | 227,134 | 15,561 | 65,618 | 108,775 | 230,886 | 131,111 | 12.5 | 34.9 | |
| | 1904 | 2,593 | 125,093 | 2,286 | 8,642 | 114,105 | 160,774 | 153,986 | 9,524 | 51,788 | 76,892 | 177,795 | 100,903 | 26.0 | 36.1 | |
| | 1899 | 1,909 | ..... | ..... | 0,751 | 90,591 | 119,608 | 100,267 | 0,692 | 36,920 | 57,406 | 130,634 | 73,228 | ..... | ..... |  |
| Furs, dressed..... | 1909 | 93 | 1,472 | 115 | 116 | 1,241 | 2,103 | 1,672 | 135 | 806 | 811 | 2,391 | 1,580 | 12.3 | -25.7 | |
| | 1904 | 85 | 1,324 | 109 | 110 | 1,105 | 1,296 | 1,296 | 110 | 755 | 1,042 | 3,216 | 1,574 | 32.3 | 129.7 | |
| | 1899 | 92 | ..... | ..... | 46 | 835 | 1,063 | 798 | 49 | 478 | 520 | 1,400 | 880 | ..... | ..... |  |
| Galvanizing..... | 1909 | 46 | 1,089 | 26 | 216 | 1,447 | 1,307 | 4,197 | 257 | 787 | 5,719 | 7,338 | 1,010 | 15.2 | 14.3 | |
| | 1904 | 36 | 1,457 | 34 | 167 | 1,256 | 1,003 | 2,090 | 192 | 620 | 4,745 | 6,419 | 1,674 | 134.8 | 159.8 | |
| | 1899 | 28 | ..... | ..... | 52 | 535 | 400 | 1,770 | 47 | 229 | 1,078 | 2,471 | 793 | ..... | ..... |  |
| Gas and electric fixtures and lamps and reflect- ors. | 1909 | 619 | 22,906 | 431 | 3,614 | 18,861 | 15,862 | 36,835 | 4,340 | 10,393 | 20,407 | 45,057 | 24,590 | 50.0 | 69.6 | |
| | 1904 | 405 | 14,653 | 334 | 1,740 | 12,570 | 8,444 | 28,002 | 2,198 | 6,408 | 11,078 | 26,560 | 15,482 | 11.9 | 34.0 | |
| | 1899 | 377 | ..... | ..... | 1,294 | 11,238 | 0,991 | 15,855 | 1,492 | 5,188 | 7,902 | 19,821 | 11,859 | ..... | ..... |  |
| Gas, illuminating and heating. | 1909 | 1,296 | 51,007 | 277 | 13,515 | 37,215 | 128,350 | 915,537 | 12,385 | 20,931 | 52,428 | 166,814 | 114,356 | 21.8 | 33.3 | |
| | 1904 | 1,019 | 40,043 | 71 | 9,406 | 30,566 | 73,101 | 725,035 | 8,404 | 17,058 | 37,180 | 125,145 | 87,965 | 36.1 | 65.3 | |
| | 1899 | 877 | ..... | ..... | 5,904 | 22,459 | 31,797 | 567,001 | 5,273 | 12,436 | 20,005 | 75,717 | 55,112 | ..... | ..... |  |
| Glass..... | 1909 | 363 | 72,573 | 87 | 3,575 | 68,911 | 123,132 | 120,288 | 4,994 | 30,300 | 32,110 | 92,095 | 59,970 | 7.7 | 15.7 | |
| | 1904 | 399 | 67,105 | 96 | 3,040 | 63,969 | 91,476 | 80,389 | 3,940 | 37,288 | 26,146 | 70,608 | 53,462 | 21.1 | 40.8 | |
| | 1899 | 355 | ..... | ..... | 2,268 | 52,818 | 62,043 | 61,424 | 2,792 | 27,085 | 16,731 | 56,540 | 39,806 | ..... | ..... |  |
| Glass, cutting, staining, and ornamenting. | 1909 | 583 | 11,090 | 617 | 1,111 | 9,362 | 4,897 | 10,296 | 1,205 | 5,249 | 6,246 | 16,101 | 9,855 | 11.7 | 22.6 | |
| | 1904 | 453 | 9,626 | 504 | 743 | 8,379 | 3,973 | 7,365 | 776 | 4,369 | 4,845 | 13,138 | 8,293 | 70.5 | 60.1 | |
| | 1899 | 411 | ..... | ..... | 475 | 4,914 | 2,098 | 4,001 | 487 | 2,394 | 3,535 | 8,750 | 5,215 | ..... | ..... |  |
| Gloves and mittens, leather. | 1909 | 377 | 12,050 | 458 | 1,138 | 11,354 | 2,880 | 16,909 | 1,256 | 4,704 | 13,208 | 23,631 | 10,423 | 6.7 | 33.2 | |
| | 1904 | 339 | 11,712 | 427 | 640 | 10,645 | 2,725 | 10,706 | 585 | 3,840 | 10,001 | 17,740 | 7,739 | -25.8 | 4.8 | |
| | 1899 | 304 | ..... | ..... | 659 | 14,345 | 2,105 | 9,090 | 547 | 4,183 | 9,483 | 16,926 | 7,443 | ..... | ..... |  |
| Glucose and starch..... | 1909 | 118 | 5,827 | 80 | 908 | 4,773 | 28,257 | 38,806 | 1,413 | 2,060 | 30,890 | 48,799 | 11,900 | 2.0 | 49.5 | |
| | 1904 | 140 | 5,409 | 111 | 019 | 4,079 | 35,936 | 24,053 | 055 | 2,641 | 25,519 | 32,050 | 7,131 | -21.3 | 5.6 | |
| | 1899 | 132 | ..... | ..... | 553 | 5,043 | 20,042 | 52,083 | 732 | 2,855 | 21,580 | 30,927 | 9,347 | ..... | ..... |  |
| Glue..... | 1909 | 65 | 3,840 | 45 | 530 | 3,265 | 15,596 | 14,289 | 747 | 1,571 | 7,525 | 13,718 | 6,193 | 14.0 | 36.7 | |
| | 1904 | 58 | 3,258 | 42 | 352 | 2,804 | 14,280 | 10,673 | 465 | 1,529 | 6,186 | 10,035 | 3,849 | 77.0 | 86.2 | |
| | 1899 | 61 | ..... | ..... | 159 | 1,618 | 0,806 | 6,144 | 192 | 085 | 3,707 | 5,389 | 1,622 | ..... | ..... |  |
| Gold and silver, leaf and foil. | 1909 | 88 | 1,553 | 108 | 62 | 1,383 | 259 | 1,184 | 78 | 637 | 1,518 | 2,630 | 1,112 | -1.4 | -2.4 | |
| | 1904 | 83 | 1,594 | 106 | 86 | 1,402 | 278 | 1,072 | 85 | 603 | 1,470 | 2,695 | 1,219 | 20.6 | 1.1 | |
| | 1899 | 93 | ..... | ..... | 35 | 1,103 | 149 | 1,087 | 36 | 499 | 1,604 | 2,666 | 1,062 | ..... | ..... |  |
| Gold and silver, reducing and refining, not from the ore. | 1909 | 62 | 090 | 61 | 173 | 456 | 1,735 | 3,894 | 249 | 346 | 21,984 | 23,012 | 1,628 | 58.9 | 26.1 | |
| | 1904 | 41 | 439 | 57 | 95 | 287 | 1,068 | 2,320 | 127 | 206 | 17,538 | 18,724 | 1,186 | 31.0 | 58.5 | |
| | 1899 | 57 | ..... | ..... | 76 | 219 | 705 | 1,944 | 83 | 141 | 10,032 | 11,812 | 880 | ..... | ..... |  |
| Graphite and graphite re- fining. | 1909 | 9 | 262 | 4 | 96 | 162 | 1,472 | 1,780 | 115 | 89 | 405 | 1,140 | 735 | -25.7 | 233.3 | |
| | 1904 | 11 | 257 | 6 | 33 | 218 | 922 | 478 | 30 | 108 | 117 | 342 | 225 | 59.1 | -20.3 | |
| | 1899 | 11 | ..... | ..... | 16 | 137 | 805 | 411 | 21 | 64 | 420 | 212 | 212 | ..... | ..... |  |
| Grease and tallow..... | 1909 | 353 | 5,504 | 364 | 783 | 4,357 | 14,013 | 16,676 | 991 | 2,629 | 15,543 | 23,419 | 7,876 | 20.1 | 24.5 | |
| | 1904 | 300 | 4,415 | 306 | 481 | 3,628 | 11,738 | 10,284 | 583 | 2,114 | 12,309 | 18,815 | 6,446 | 77.8 | 57.4 | |
| | 1899 | 287 | ..... | ..... | 266 | 2,040 | 8,031 | 7,071 | 266 | 1,067 | 8,762 | 11,953 | 3,201 | ..... | ..... |  |
| Grindstones..... | 1909 | 14 | 1,485 | 6 | 85 | 1,394 | 5,700 | 4,939 | 159 | 638 | 408 | 1,688 | 1,220 | 91.4 | 114.2 | |
| | 1904 | 23 | 766 | 10 | 50 | 706 | 2,602 | 1,809 | 81 | 275 | 204 | 788 | 524 | -39.5 | -27.6 | |
| | 1899 | 25 | ..... | ..... | 60 | 1,107 | 2,677 | 903 | 58 | 407 | 204 | 1,089 | 825 | ..... | ..... |  |
| Haircloth ¹ | 1909 | 14 | 621 | 11 | 72 | 538 | 995 | 2,281 | 72 | 252 | 1,614 | 2,230 | 616 | ..... | ..... |  |
| Hair work..... | 1909 | 260 | 4,383 | 298 | 551 | 3,534 | 218 | 4,716 | 434 | 1,610 | 6,081 | 11,216 | 5,135 | 309.5 | 529.4 | |
| | 1904 | 125 | 1,137 | 148 | 126 | 883 | 62 | 1,132 | 98 | 335 | 728 | 1,782 | 1,054 | 5.2 | 26.7 | |
| | 1899 | 168 | ..... | ..... | 44 | 820 | 23 | 760 | 33 | 287 | 496 | 1,406 | 910 | ..... | ..... |  |
| Hammocks..... | 1909 | 15 | 325 | 14 | 30 | 272 | 157 | 344 | 34 | 95 | 311 | 578 | 287 | 0.4 | 29.3 | |
| | 1904 | 14 | 316 | 19 | 26 | 271 | 171 | 290 | 27 | 91 | 190 | 447 | 257 | -20.1 | -6.9 | |
| | 1899 | 13 | ..... | ..... | 21 | 339 | 113 | 308 | 16 | 102 | 243 | 480 | 237 | ..... | ..... |  |
| Hand stamps and stencils and brands. | 1909 | 361 | 2,530 | 375 | 513 | 1,651 | 903 | 2,439 | 433 | 952 | 1,127 | 3,073 | 2,540 | 9.6 | 30.7 | |
| | 1904 | 327 | 2,149 | 363 | 280 | 1,506 | 721 | 1,915 | 224 | 797 | 737 | 2,811 | 2,074 | 2.4 | 7.7 | |
| | 1899 | 360 | ..... | ..... | 171 | 1,470 | 462 | 1,736 | 141 | 696 | 663 | 2,611 | 1,948 | ..... | ..... |  |
| Hat and cap materials... | 1909 | 74 | 2,618 | 63 | 188 | 2,367 | 2,922 | 6,183 | 231 | 947 | 5,380 | 8,236 | 2,856 | -1.9 | 27.9 | |
| | 1904 | 65 | 2,615 | 87 | 114 | 2,414 | 2,239 | 4,265 | 127 | 849 | 4,217 | 6,440 | 2,223 | 76.1 | 67.3 | |
| | 1899 | 70 | ..... | ..... | 50 | 1,371 | 1,770 | 1,744 | 60 | 434 | 2,798 | 3,849 | 1,051 | ..... | ..... |  |
| Hats and caps, other than felt, straw, and wool. ² | 1909 | 404 | 7,609 | 638 | 720 | 6,201 | 990 | 5,275 | 783 | 3,421 | 6,690 | 13,680 | 6,999 | -6.0 | 5.7 | |
| | 1904 | 415 | 7,617 | 605 | 418 | 6,594 | 797 | 4,185 | 456 | 3,354 | 6,308 | 12,956 | 6,645 | -47.4 | -39.4 | |
| | 1899 | 644 | ..... | ..... | 643 | 12,544 | 3,262 | 8,394 | 675 | 5,025 | 10,907 | 21,393 | 10,486 | ..... | ..... |  |
| Hats, fur-felt..... | 1909 | 273 | 27,091 | 264 | 1,703 | 25,064 | 19,245 | 35,734 | 2,097 | 14,223 | 22,109 | 47,865 | 25,756 | 13.7 | 30.7 | |
| | 1904 | 216 | 23,066 | 252 | 1,367 | 22,047 | 16,030 | 23,258 | 1,488 | 11,282 | 15,975 | 36,029 | 20,654 | 16.8 | 31.7 | |
| | 1899 | 171 | ..... | ..... | 726 | 18,880 | 11,843 | 16,701 | 944 | 9,119 | 13,514 | 27,811 | 14,297 | ..... | ..... |  |
| Hats, straw ³ | 1909 | 98 | 9,704 | 91 | 790 | 8,814 | 3,482 | 11,538 | 1,427 | 4,471 | 11,408 | 21,424 | 9,956 | 58.3 | 106.9 | |
| | 1904 | 68 | 6,084 | 79 | 438 | 5,567 | 2,366 | 6,036 | 487 | 2,434 | 5,510 | 10,357 | 4,847 | ..... | ..... |  |

¹ Included in other classifications in 1904 and 1899.² Includes "hats, straw," in 1899.³ Included in "hats and caps, other than felt, straw, and wool," in 1899.

STATES, CITIES, AND INDUSTRIES.

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COMPARATIVE SUMMARY FOR THE UNITED STATES, BY SPECIFIED INDUSTRIES: 1909, 1904, AND 1899—Continued.

[See explanatory notes on the first page of this table.]

| INDUSTRY. | | Cen- sus. | Number of estab- lish- ments. | PERSONS ENGAGED IN INDUSTRY. | | | | | Primary horse- power. | Capital. | Sala- ries. | Wages. | Cost of materials. | Value of products. | Value added by manu- facture (value of products less cost of materi- als). | PER CENT OF INCREASE. | |
|---|--|--------------|--|------------------------------|---|-----------------------------|---|---|-----------------------------|----------|----------------|---------|-----------------------|-----------------------|--|----------------------------|-------|
| | | | | Total. | Pro- pri- etors and firm mem- bers. | Salaried em- ployees. | Wage earners (average number). | Wage earners (aver- age num- ber). | | | | | | | | Value of prod- ucts. | |
| | | | | | | | | | | | | | | | | | |
| Expressed in thousands. | | | | | | | | | | | | | | | | | |
| Hones and whetstones... | | 1909 | 18 | 173 | 13 | 8 | 152 | 677 | | \$382 | \$6 | \$72 | \$110 | \$266 | \$158 | -30.9 | -13.0 |
| | | 1904 | 17 | 251 | 12 | 19 | 220 | 684 | | 423 | 20 | 94 | 103 | 308 | 305 | 16.4 | 57.1 |
| | | 1899 | 18 | ..... | ..... | 19 | 189 | 593 | | 217 | 6 | 73 | 64 | 196 | 132 | ..... | ..... |
| Horseshoes, not made in steel works or rolling mills. | | 1909 | 19 | 360 | 7 | 60 | 293 | 1,045 | 1,396 | 99 | 166 | 356 | 1,015 | 659 | 659 | 28.3 | -27.0 |
| | | 1904 | 8 | 273 | 1 | 40 | 232 | 1,014 | 1,227 | 54 | 127 | 256 | 799 | 543 | 543 | 0.4 | 60.4 |
| | | 1899 | 7 | ..... | ..... | 18 | 231 | 545 | 463 | 36 | 117 | 211 | 498 | 287 | 287 | ..... | ..... |
| Hosiery and knit goods... | | 1909 | 1,374 | 136,130 | 1,134 | 5,721 | 129,275 | 103,709 | 163,641 | 7,691 | 44,740 | 110,241 | 209,143 | 89,902 | 89,902 | 24.2 | 46.0 |
| | | 1904 | 1,144 | 109,489 | 1,067 | 4,330 | 104,092 | 78,769 | 106,943 | 4,455 | 31,615 | 76,789 | 137,676 | 60,287 | 60,287 | 24.4 | 43.0 |
| | | 1899 | 1,006 | ..... | ..... | 2,831 | 83,691 | 57,346 | 82,006 | 3,138 | 24,434 | 51,195 | 95,834 | 44,639 | 44,639 | ..... | ..... |
| House-furnishing goods, not elsewhere specified. | | 1909 | 260 | 5,916 | 236 | 773 | 4,907 | 9,328 | 12,784 | 1,007 | 2,035 | 12,371 | 18,509 | 6,138 | 6,138 | 2.7 | 23.3 |
| | | 1904 | 237 | 5,555 | 234 | 543 | 4,778 | 8,748 | 9,872 | 1,860 | 9,627 | 15,011 | 5,384 | 5,384 | 5,384 | -8.3 | 5.1 |
| | | 1899 | 209 | ..... | ..... | 584 | 5,212 | 8,531 | 10,634 | 628 | 1,838 | 9,196 | 14,278 | 5,080 | 5,080 | ..... | ..... |
| Ice, manufactured..... | | 1909 | 2,004 | 21,107 | 1,066 | 3,927 | 16,114 | 317,789 | 118,641 | 3,868 | 9,779 | 11,317 | 42,653 | 31,606 | 31,606 | 59.5 | 80.6 |
| | | 1904 | 1,320 | 13,179 | 746 | 2,332 | 10,101 | 191,660 | 66,592 | 2,001 | 5,549 | 6,011 | 23,799 | 17,779 | 17,779 | 46.8 | 72.6 |
| | | 1899 | 775 | ..... | ..... | 1,531 | 6,880 | 100,421 | 38,020 | 1,226 | 3,408 | 3,312 | 13,781 | 10,469 | 10,469 | ..... | ..... |
| Ink, printing..... | | 1909 | 71 | 1,854 | 38 | 695 | 1,121 | 5,857 | 7,144 | 1,092 | 773 | 4,175 | 8,965 | 4,690 | 4,690 | 57.7 | 58.5 |
| | | 1904 | 60 | 1,117 | 45 | 361 | 711 | 3,384 | 4,610 | 530 | 475 | 2,613 | 5,774 | 3,181 | 3,181 | 41.4 | 87.5 |
| | | 1899 | 60 | ..... | ..... | 253 | 503 | 1,895 | 2,945 | 345 | 296 | 1,536 | 3,080 | 1,544 | 1,544 | ..... | ..... |
| Ink, writing..... | | 1909 | 47 | 824 | 37 | 282 | 505 | 169 | 2,114 | 376 | 203 | 1,078 | 2,565 | 1,427 | 1,427 | 17.4 | 33.2 |
| | | 1904 | 42 | 607 | 36 | 141 | 430 | 224 | 1,287 | 191 | 170 | 858 | 1,881 | 1,023 | 1,023 | 50.9 | 45.5 |
| | | 1899 | 44 | ..... | ..... | 148 | 285 | 359 | 877 | 134 | 114 | 573 | 1,293 | 729 | 729 | ..... | ..... |
| Instruments, professional and scientific. | | 1909 | 263 | 6,175 | 222 | 1,136 | 4,817 | 4,856 | 11,724 | 1,233 | 2,925 | 2,918 | 10,504 | 7,586 | 7,586 | 40.2 | 95.3 |
| | | 1904 | 225 | 4,145 | 200 | 508 | 3,437 | 2,110 | 5,383 | 532 | 1,823 | 1,350 | 5,378 | 4,028 | 4,028 | 23.9 | 10.8 |
| | | 1899 | 261 | ..... | ..... | 389 | 2,775 | 2,471 | 4,476 | 402 | 1,429 | 1,363 | 4,833 | 3,490 | 3,490 | ..... | ..... |
| Iron and steel, blast fur- naces. | | 1909 | 208 | 43,061 | 48 | 4,584 | 38,429 | 1,173,422 | 487,581 | 6,525 | 24,607 | 320,638 | 361,429 | 70,791 | 70,791 | 9.6 | 68.8 |
| | | 1904 | 190 | 37,335 | 26 | 2,231 | 35,078 | 773,278 | 236,146 | 2,891 | 18,935 | 178,942 | 231,823 | 52,881 | 52,881 | -10.6 | 12.1 |
| | | 1899 | 223 | ..... | ..... | 1,757 | 39,241 | 497,272 | 143,159 | 2,304 | 18,464 | 131,594 | 206,737 | 75,233 | 75,233 | ..... | ..... |
| Iron and steel, steel works and rolling mills. | | 1909 | 446 | 260,762 | 47 | 20,639 | 240,076 | 2,100,978 | 1,004,735 | 26,191 | 163,201 | 657,561 | 965,723 | 328,223 | 328,223 | 15.7 | 46.3 |
| | | 1904 | 415 | 221,956 | 64 | 14,330 | 207,562 | 1,649,299 | 700,182 | 17,860 | 122,492 | 441,294 | 673,965 | 232,761 | 232,761 | 13.3 | 12.9 |
| | | 1899 | 445 | ..... | ..... | 7,454 | 188,249 | 1,100,801 | 430,232 | 9,433 | 102,336 | 360,895 | 597,212 | 236,317 | 236,317 | ..... | ..... |
| Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills. | | 1909 | 108 | 12,395 | 38 | 1,012 | 11,345 | 22,113 | 30,250 | 1,373 | 5,793 | 12,804 | 24,485 | 11,681 | 11,681 | 40.2 | 66.7 |
| | | 1904 | 88 | 8,771 | 49 | 632 | 8,090 | 13,825 | 18,913 | 912 | 3,642 | 7,897 | 14,687 | 6,890 | 6,890 | 5.6 | 5.1 |
| | | 1899 | 72 | ..... | ..... | 420 | 7,660 | 9,165 | 10,800 | 571 | 2,992 | 8,071 | 13,978 | 5,907 | 5,907 | ..... | ..... |
| Iron and steel, doors and shutters. | | 1909 | 29 | 1,816 | 18 | 197 | 1,601 | 1,997 | 3,045 | 224 | 874 | 1,283 | 3,066 | 1,723 | 1,723 | 129.0 | 109.5 |
| | | 1904 | 24 | 811 | 19 | 93 | 699 | 969 | 1,120 | 117 | 407 | 602 | 1,477 | 875 | 875 | 497.4 | 301.6 |
| | | 1899 | 13 | ..... | ..... | 20 | 117 | 223 | 262 | 19 | 86 | 115 | 320 | 204 | 204 | ..... | ..... |
| Iron and steel forgings.... | | 1909 | 172 | 9,193 | 90 | 935 | 8,168 | 27,803 | 27,755 | 1,300 | 5,003 | 10,240 | 20,293 | 10,053 | 10,053 | 44.2 | 67.6 |
| | | 1904 | 138 | 6,347 | 77 | 605 | 5,665 | 16,069 | 28,246 | 824 | 3,428 | 5,752 | 12,119 | 6,358 | 6,358 | 26.8 | 16.0 |
| | | 1899 | 90 | ..... | ..... | 322 | 4,688 | 7,697 | 9,676 | 411 | 2,559 | 5,213 | 10,438 | 5,225 | 5,225 | ..... | ..... |
| Iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills. | | 1909 | 57 | 3,239 | 42 | 432 | 2,765 | 7,723 | 8,898 | 562 | 1,353 | 3,972 | 8,182 | 4,220 | 4,220 | -24.9 | -8.2 |
| | | 1904 | 76 | 4,147 | 60 | 406 | 3,681 | 10,533 | 8,742 | 454 | 1,684 | 4,686 | 8,923 | 4,237 | 4,237 | -17.8 | -39.6 |
| | | 1899 | 102 | ..... | ..... | 431 | 4,477 | 12,853 | 10,751 | 444 | 2,042 | 8,562 | 14,777 | 6,215 | 6,215 | ..... | ..... |
| Iron and steel pipe, wrought. | | 1909 | 28 | 7,309 | 17 | 475 | 6,817 | 20,656 | 22,206 | 657 | 3,963 | 22,942 | 30,866 | 7,944 | 7,944 | 25.9 | 77.5 |
| | | 1904 | 27 | 5,723 | 11 | 296 | 5,416 | 15,094 | 13,053 | 369 | 2,473 | 12,747 | 17,491 | 4,654 | 4,654 | -2.2 | -18.3 |
| | | 1899 | 19 | ..... | ..... | 193 | 5,536 | 11,717 | 18,344 | 266 | 2,496 | 15,634 | 21,292 | 5,708 | 5,708 | ..... | ..... |
| Jewelry..... | | 1909 | 1,537 | 38,992 | 1,846 | 4,799 | 30,247 | 11,204 | 63,811 | 5,838 | 18,358 | 36,675 | 80,350 | 43,675 | 43,675 | 37.4 | 51.0 |
| | | 1904 | 1,023 | 26,119 | 1,436 | 2,603 | 22,080 | 7,872 | 39,679 | 2,939 | 12,593 | 24,177 | 52,236 | 28,049 | 28,049 | 7.9 | 15.4 |
| | | 1899 | 851 | ..... | ..... | 1,806 | 20,468 | 6,656 | 27,872 | 1,842 | 10,644 | 22,335 | 46,129 | 23,894 | 23,894 | ..... | ..... |
| Jewelry and instrument cases. | | 1909 | 120 | 2,441 | 139 | 232 | 2,070 | 527 | 1,841 | 232 | 954 | 1,221 | 3,116 | 1,895 | 1,895 | 23.5 | 36.0 |
| | | 1904 | 97 | 1,923 | 126 | 121 | 1,676 | 359 | 1,438 | 107 | 624 | 843 | 2,282 | 1,449 | 1,449 | 104.6 | 93.1 |
| | | 1899 | 63 | ..... | ..... | 52 | 819 | 208 | 548 | 35 | 323 | 496 | 1,157 | 721 | 721 | ..... | ..... |
| Kaolin and ground earthen ware. | | 1909 | 119 | 2,351 | 53 | 308 | 1,990 | 20,920 | 13,226 | 417 | 897 | 2,042 | 4,681 | 2,639 | 2,639 | -7.7 | 5.5 |
| | | 1904 | 131 | 2,501 | 91 | 253 | 2,157 | 17,325 | 10,196 | 329 | 899 | 1,869 | 4,429 | 2,570 | 2,570 | 8.0 | 19.3 |
| | | 1899 | 145 | ..... | ..... | 232 | 2,094 | 18,404 | 12,212 | 257 | 821 | 1,681 | 3,722 | 2,071 | 2,071 | ..... | ..... |
| Labels and tags..... | | 1909 | 96 | 2,880 | 85 | 482 | 2,313 | 1,589 | 3,857 | 541 | 1,123 | 1,910 | 4,670 | 2,760 | 2,760 | 71.5 | 89.7 |
| | | 1904 | 67 | 1,610 | 65 | 197 | 1,348 | 919 | 2,118 | 258 | 609 | 957 | 2,462 | 1,505 | 1,505 | 78.8 | 122.8 |
| | | 1899 | 47 | ..... | ..... | 96 | 754 | 392 | 848 | 120 | 289 | 368 | 1,105 | 717 | 717 | ..... | ..... |
| Lapidary work..... | | 1909 | 77 | 886 | 90 | 169 | 627 | 679 | 4,808 | 195 | 889 | 6,560 | 9,173 | 2,613 | 2,613 | 23.7 | 20.0 |
| | | 1904 | 54 | 681 | 72 | 102 | 507 | 554 | 2,384 | 109 | 657 | 6,224 | 7,647 | 1,423 | 1,423 | 1.5 | 32.2 |
| | | 1899 | 60 | ..... | ..... | 43 | 498 | 212 | 3,087 | 61 | 499 | 4,656 | 5,786 | 1,130 | 1,130 | ..... | ..... |
| Lard, refined, not made in slaughtering and meat- packing establishments. | | 1909 | 7 | 515 | 6 | 110 | 399 | 723 | 1,434 | 108 | 180 | 9,631 | 10,326 | 695 | 695 | -9.5 | 68.5 |
| | | 1904 | 9 | 528 | 10 | 77 | 441 | 598 | 1,163 | 108 | 219 | 5,640 | 6,129 | 449 | 449 | -11.6 | -29.0 |
| | | 1899 | 19 | ..... | ..... | 54 | 499 | 714 | 1,336 | 80 | 238 | 7,497 | 8,631 | 1,134 | 1,134 | ..... | ..... |
| Lasts..... | | 1909 | 60 | 2,029 | 47 | 254 | 1,728 | 3,386 | 3,061 | 412 | 1,203 | 1,324 | | | | | |

COMPARATIVE SUMMARY FOR THE UNITED STATES, BY SPECIFIED INDUSTRIES: 1909, 1904, AND 1899—Continued.

[See explanatory notes on the first page of this table.]

| Table 110—Contd. | | | | | | | | | | | | | | | |
|--|----------------------|---|------------------------------|--|-----------------------------|--|-------------------------------------|---------------------------------|----------------------------|-------------------------------|---------------------------------|---------------------------------|--|---|-------------------------------|
| INDUSTRY. | Cen- sus. | Num- ber of estab- lish- ments. | PERSONS ENGAGED IN INDUSTRY. | | | | Primary horse- power. | Capital. | Sala- ries. | Wages. | Cost of materials. | Value of products. | Value added by manu- facture (value of products less cost of mate- rials). | PER CENT OF INCREASE. | |
| | | | Total. | Pro- pri- tors and firm mem- bers. | Salaried em- ployees. | Wage earn- ers (average number). | | | | | | | | Wage earn- ers (average num- ber). | Value of prod- ucts. |
| | | | | | | | | | | | | | | | |
| Expressed in thousands. | | | | | | | | | | | | | | | |
| Leather, tanned, curried, and finished. | 1909 1904 1899 | 919 1,049 1,306 | 67,100 61,602 | 784 1,112 | 4,114 3,251 2,442 | 62,202 57,239 52,109 | 148,140 117,450 88,800 | \$332,727 242,584 173,977 | \$6,744 4,452 3,150 | \$32,103 27,049 22,591 | \$248,279 191,179 155,000 | \$327,874 252,621 204,038 | \$79,595 61,442 49,038 | 8.7 9.8 | 29.8 23.8 |
| Lime ¹ | 1909 1904 1899 | 853 526 998 | 15,659 12,383 | 794 500 | 968 731 1,406 | 13,897 11,152 19,085 | 27,671 18,198 93,540 | 32,520 22,596 48,787 | 1,080 703 1,416 | 5,980 4,597 7,741 | 6,731 5,437 11,040 | 17,952 14,751 28,674 | 11,221 9,314 17,634 | 24.6 -41.6 | 21.7 -48.6 |
| Liquors, distilled..... | 1909 1904 1899 | 613 805 965 | 8,328 7,229 | 563 794 | 1,335 1,080 661 | 6,430 5,355 3,720 | 46,120 42,349 31,427 | 72,450 60,101 32,540 | 1,988 1,393 890 | 3,074 2,657 1,733 | 35,977 25,626 15,145 | 204,699 131,270 96,704 | 168,722 105,644 81,649 | 20.1 44.0 | 55.9 35.6 |
| Liquors, malt..... | 1909 1904 1899 | 1,414 1,530 1,507 | 66,725 58,068 | 639 876 | 11,507 9,055 7,146 | 54,579 48,137 39,459 | 347,726 266,159 197,901 | 671,158 515,630 413,767 | 22,804 17,316 13,038 | 41,206 34,541 25,776 | 96,596 74,907 51,598 | 374,730 298,346 230,915 | 278,134 223,439 185,317 | 13.4 22.0 | 25.6 25.9 |
| Liquors, vinous..... | 1909 1904 1899 | 290 435 359 | 2,726 2,801 | 236 396 | 579 492 344 | 1,911 1,913 1,163 | 6,771 6,713 3,416 | 27,908 17,775 9,838 | 863 573 305 | 972 1,002 446 | 6,626 5,693 3,089 | 13,121 11,098 6,547 | 6,495 5,405 2,858 | -0.1 64.5 | 18.2 69.5 |
| Locomotives, not made by railroad companies. ² | 1909 1904 | 16 15 | 10,945 25,979 | 7 9 | 2,029 1,164 | 14,909 24,806 | 35,102 29,806 | 52,060 38,421 | 2,297 1,675 | 8,914 15,798 | 15,060 27,703 | 31,582 59,552 | 16,522 31,849 | -39.9 | -47.0 |
| Looking-glass and pic- ture frames. | 1909 1904 1899 | 437 442 362 | 7,470 8,070 | 431 407 | 1,018 984 884 | 6,021 6,625 6,020 | 5,330 4,653 3,357 | 9,058 7,034 5,500 | 1,119 955 789 | 3,261 3,315 2,550 | 5,525 4,975 4,729 | 13,475 13,270 10,847 | 7,950 8,295 6,118 | -9.1 9.9 | 1.5 22.2 |
| Lumber and timber prod- ucts. | 1909 1904 1899 | 40,671 25,153 28,133 | 784,989 593,342 | 48,825 30,738 | 41,145 30,038 20,940 | 995,019 532,566 508,766 | 2,840,082 1,886,024 1,658,594 | 1,170,675 733,708 541,595 | 47,428 31,737 18,715 | 318,739 245,834 188,395 | 508,118 360,325 304,964 | 1,156,120 884,267 700,992 | 648,011 523,942 390,028 | 30.5 4.7 | 30.7 16.2 |
| Malt..... | 1909 1904 1899 | 114 141 146 | 2,237 2,594 | 52 96 | 425 444 290 | 1,760 2,054 1,990 | 26,441 20,288 13,834 | 60,286 47,934 39,288 | 884 747 471 | 1,348 1,457 1,183 | 30,464 23,621 14,817 | 38,252 30,286 19,374 | 7,788 6,668 4,557 | -14.3 3.2 | 26.3 56.3 |
| Marble and stone work ³ | 1909 1904 1899 | 4,064 2,608 2,952 | 77,275 57,866 | 6,026 3,300 | 5,646 3,456 2,606 | 65,093 51,110 41,686 | 187,686 102,387 83,119 | 114,842 79,170 52,982 | 6,386 4,000 2,440 | 42,546 31,899 22,843 | 37,397 26,569 21,546 | 113,093 84,844 63,667 | 75,696 58,275 42,121 | 28.4 22.6 | 33.2 33.3 |
| Matches..... | 1909 1904 1899 | 26 23 22 | 4,220 3,308 | 46 7 | 543 176 66 | 3,631 3,185 2,047 | 6,224 3,539 2,066 | 11,953 5,334 3,893 | 723 178 87 | 1,390 1,101 613 | 4,599 3,285 3,421 | 11,853 5,047 6,006 | 6,754 2,362 2,585 | 14.0 55.6 | 101.0 -8.0 |
| Mats and matting..... | 1909 1904 1899 | 12 12 9 | 1,040 690 | 18 13 | 85 58 42 | 937 625 1,107 | 1,433 1,524 1,733 | 4,051 839 994 | 95 67 31 | 385 249 237 | 1,067 574 510 | 2,432 1,243 1,165 | 1,365 669 | 49.9 -47.8 | 95.7 6.7 |
| Mattresses and spring beds | 1909 1904 1899 | 930 716 589 | 14,109 12,438 | 869 757 | 1,918 1,254 851 | 11,322 10,427 7,649 | 17,689 13,220 7,980 | 23,735 14,514 7,999 | 2,039 1,253 770 | 5,771 4,816 3,102 | 20,483 15,320 10,227 | 35,783 27,755 17,950 | 15,300 12,429 7,729 | 8.6 36.3 | 28.9 54.6 |
| Millinery and lace goods.. | 1909 1904 1899 | 1,579 890 591 | 46,301 31,417 | 1,034 1,163 | 5,166 2,754 1,692 | 39,201 27,660 16,871 | 7,918 4,737 1,852 | 35,705 17,850 10,765 | 5,381 2,296 1,393 | 16,308 10,307 5,818 | 45,040 26,259 15,054 | 85,894 50,778 29,469 | 40,854 24,510 13,815 | 42.5 63.0 | 69.2 72.3 |
| Mineral and soda waters.. | 1909 1904 1899 | 4,016 3,468 2,763 | 22,060 16,554 | 5,743 4,099 | 3,170 1,576 1,423 | 13,147 10,879 8,788 | 19,892 12,214 8,037 | 42,305 28,098 10,727 | 2,840 1,393 1,161 | 6,902 5,488 4,080 | 16,466 10,002 8,565 | 43,508 30,251 23,209 | 27,042 20,740 14,704 | 20.8 23.8 | 43.8 30.0 |
| Mirrors..... | 1909 1904 1899 | 148 110 103 | 3,509 3,008 | 131 117 | 384 302 269 | 2,994 2,649 2,555 | 3,862 2,795 2,333 | 4,890 3,859 3,184 | 450 332 277 | 1,703 1,375 1,232 | 5,905 4,587 4,906 | 9,571 7,605 8,004 | 3,666 3,018 3,008 | 13.0 3.7 | 25.9 -5.0 |
| Models and patterns, not including paper pat- terns. | 1909 1904 1899 | 709 547 530 | 5,450 3,078 | 840 656 | 430 242 118 | 4,171 2,780 2,607 | 5,486 4,358 3,021 | 5,576 2,890 2,260 | 490 238 113 | 2,029 1,788 1,565 | 2,876 922 825 | 8,868 4,545 3,834 | 5,092 3,623 3,009 | 50.0 6.6 | 95.1 18.5 |
| Moving pictures..... | 1909 | 16 | 718 | 5 | 207 | 506 | 480 | 19,428 | 396 | 335 | 2,192 | 4,206 | 2,014 | ..... | ..... |
| Mucilage and paste..... | 1909 1904 1899 | 127 111 116 | 901 728 | 108 100 | 255 158 166 | 538 470 458 | 2,335 1,505 1,426 | 2,717 2,430 1,220 | 353 166 155 | 286 237 193 | 3,283 2,301 1,613 | 4,918 3,556 2,556 | 1,635 1,255 943 | 14.5 2.6 | 38.3 39.1 |
| Musical instruments and materials, not specified. | 1909 1904 1899 | 187 181 229 | 2,269 2,554 | 187 190 | 200 225 153 | 1,822 2,139 2,405 | 1,423 1,003 1,417 | 3,208 3,743 3,896 | 343 262 142 | 992 1,162 1,232 | 890 1,130 1,205 | 3,228 3,482 3,395 | 2,338 2,352 2,190 | -14.8 -11.1 | -7.3 2.6 |
| Musical instruments, pianos and organs and materials. | 1909 1904 1899 | 507 444 390 | 41,882 36,106 | 297 303 | 3,565 2,732 1,518 | 38,020 33,081 21,300 | 41,623 30,134 20,789 | 103,234 68,482 43,810 | 5,552 3,728 2,015 | 22,762 18,527 11,543 | 43,765 27,987 17,371 | 89,790 60,093 41,024 | 46,025 38,106 23,653 | 14.9 55.2 | 35.9 61.1 |
| Needles, pins, and hooks and eyes. | 1909 1904 1899 | 49 46 52 | 4,978 4,196 | 27 31 | 313 200 135 | 4,638 3,965 2,653 | 4,542 2,440 2,103 | 6,705 5,332 4,618 | 393 253 147 | 2,004 1,690 1,067 | 2,329 1,584 1,228 | 6,094 4,751 3,238 | 4,365 3,167 2,010 | 17.0 49.5 | 40.9 46.7 |
| Oakum..... | 1909 1904 1899 | 6 6 7 | 129 158 | 7 5 | 9 11 10 | 113 142 171 | 289 367 375 | 342 488 416 | 14 14 17 | 42 241 51 | 232 284 284 | 338 301 440 | 106 120 156 | -20.4 -17.0 | -6.4 -18.0 |
| Oil, castor..... | 1909 1904 1899 | 4 4 3 | 70 57 | 4 | 12 14 12 | 54 43 40 | 385 500 260 | 1,038 625 539 | 27 27 17 | 32 28 29 | 661 487 293 | 905 643 395 | 244 156 102 | 25.6 -12.2 | 40.7 62.8 |
| Oil, cottonseed, and cake. | 1909 1904 1899 | 817 715 369 | 21,273 18,832 | 110 63 | 4,092 3,220 1,669 | 17,071 15,540 11,007 | 192,842 150,246 73,071 | 91,086 73,770 34,451 | 4,295 3,062 1,579 | 5,835 4,838 3,143 | 119,838 80,030 45,166 | 147,868 96,408 58,727 | 28,035 16,378 13,561 | 9.9 41.2 | 53.4 64.2 |

¹ Includes "cement" and "wall plaster" in 1899.² Included in "foundry and machine-shop products" in 1899.³ Includes "artificial stone" in 1899.

STATES, CITIES, AND INDUSTRIES.

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COMPARATIVE SUMMARY FOR THE UNITED STATES, BY SPECIFIED INDUSTRIES: 1909, 1904, AND 1899—Continued.

[See explanatory notes on the first page of this table.]

| Table 110—Contd. | | Cen- sus. | Number of estab- lish- ments. | PERSONS ENGAGED IN INDUSTRY. | | | | Primary horse- power. | Capital. | Sala- ries. | Wages. | Cost of materials. | Value of products. | Value added by manu- facture (value of products less cost of mate- rials). | PER CENT OF INCREASE. | |
|--|--------|--------------|--|---|-----------------------------|---|---|-----------------------------|----------|----------------|---------|-----------------------|-----------------------|---|----------------------------|-------------------------|
| INDUSTRY. | Total. | | | Pro- pri- etors and firm mem- bers. | Salaried em- ployees. | Wage earners (average number). | Wage earners (aver- age num- ber). | | | | | | | | Value of prod- ucts. | |
| | | | | | | | | | | | | | | | | Expressed in thousands. |
| Oil, essential..... | 1909 | 68 | 408 | 73 | 45 | 290 | 1,218 | \$1,365 | \$61 | \$123 | \$1,255 | \$1,787 | \$482 | 119.7 | 18.6 | |
| | 1904 | 52 | 237 | 68 | 37 | 132 | 849 | 723 | 40 | 70 | 1,111 | 1,465 | 354 | -21.4 | 80.2 | |
| | 1899 | 47 | ..... | ..... | 39 | 168 | 1,048 | 576 | 25 | 61 | 589 | 818 | 224 | ..... | ..... |  |
| Oil, linseed..... | 1909 | 29 | 1,753 | 9 | 292 | 1,452 | 13,211 | 18,992 | 740 | 893 | 21,035 | 36,739 | 5,704 | 7.6 | 33.2 | |
| | 1904 | 30 | 1,518 | 13 | 156 | 1,349 | 9,473 | 9,850 | 423 | 786 | 23,153 | 27,577 | 4,424 | 1.6 | 1.4 | |
| | 1899 | 48 | ..... | ..... | 285 | 1,328 | 8,491 | 15,461 | 446 | 693 | 24,396 | 27,154 | 2,758 | ..... | ..... |  |
| Oil, not elsewhere speci- fied..... | 1909 | 189 | 3,144 | 118 | 1,311 | 1,715 | 5,772 | 18,441 | 1,923 | 1,060 | 21,497 | 39,865 | 9,458 | 31.4 | 34.6 | |
| | 1904 | 186 | 2,116 | 148 | 663 | 1,305 | 5,207 | 11,229 | 882 | 752 | 14,438 | 22,928 | 8,485 | -10.4 | 28.2 | |
| | 1899 | 201 | ..... | ..... | 810 | 1,456 | 3,432 | 9,889 | 991 | 738 | 10,975 | 18,612 | 7,637 | ..... | ..... |  |
| Oilcloth and linoleum.... | 1909 | 31 | 5,557 | 11 | 345 | 5,201 | 16,125 | 19,634 | 649 | 2,826 | 15,550 | 23,339 | 7,789 | 33.9 | 57.8 | |
| | 1904 | 27 | 4,112 | 12 | 217 | 3,883 | 10,112 | 13,803 | 361 | 1,944 | 10,650 | 14,792 | 4,742 | 20.2 | 29.7 | |
| | 1899 | 27 | ..... | ..... | 153 | 3,290 | 7,561 | 8,879 | 295 | 1,628 | 7,550 | 11,408 | 3,853 | ..... | ..... |  |
| Oleomargarine..... | 1909 | 12 | 773 | 1 | 166 | 606 | 2,406 | 3,558 | 276 | 413 | 6,497 | 8,148 | 1,651 | 16.1 | 96.2 | |
| | 1904 | 14 | 730 | 2 | 206 | 522 | 1,560 | 1,551 | 253 | 316 | 4,308 | 5,574 | 1,176 | -51.8 | -55.4 | |
| | 1899 | 24 | ..... | ..... | 394 | 1,084 | 1,356 | 3,024 | 412 | 534 | 7,649 | 12,500 | 4,850 | ..... | ..... |  |
| Optical goods..... | 1909 | 217 | 7,809 | 163 | 1,248 | 6,398 | 5,725 | 10,147 | 1,157 | 3,364 | 4,187 | 11,735 | 7,548 | 47.8 | 91.8 | |
| | 1904 | 122 | 4,742 | 96 | 816 | 4,330 | 3,410 | 5,381 | 427 | 1,923 | 2,320 | 6,117 | 3,797 | 16.6 | 17.4 | |
| | 1899 | 91 | ..... | ..... | 375 | 3,715 | 2,544 | 4,212 | 287 | 1,599 | 2,101 | 5,211 | 3,110 | ..... | ..... |  |
| Paint and varnish..... | 1909 | 791 | 21,896 | 456 | 7,200 | 14,240 | 56,162 | 103,995 | 10,378 | 8,271 | 79,016 | 124,889 | 45,873 | 22.4 | 37.5 | |
| | 1904 | 639 | 16,480 | 439 | 4,408 | 11,633 | 41,288 | 75,486 | 5,677 | 6,264 | 59,327 | 90,640 | 31,013 | 20.0 | 30.6 | |
| | 1899 | 600 | ..... | ..... | 3,710 | 9,697 | 30,443 | 60,053 | 5,017 | 4,926 | 44,739 | 69,562 | 24,823 | ..... | ..... |  |
| Paper and wood pulp.... | 1909 | 777 | 81,473 | 250 | 5,245 | 75,978 | 1,304,265 | 409,348 | 9,510 | 40,805 | 165,442 | 267,657 | 102,215 | 15.2 | 41.8 | |
| | 1904 | 761 | 70,051 | 309 | 3,778 | 65,964 | 1,093,708 | 277,444 | 6,097 | 32,019 | 111,252 | 188,715 | 77,462 | 32.9 | 48.2 | |
| | 1899 | 763 | ..... | ..... | 2,935 | 49,646 | 762,118 | 167,508 | 4,501 | 20,746 | 70,536 | 127,226 | 56,796 | ..... | ..... |  |
| Paper goods, not else- where specified..... | 1909 | 403 | 22,385 | 228 | 2,946 | 19,211 | 27,067 | 48,662 | 3,701 | 8,169 | 31,249 | 55,171 | 23,922 | 30.5 | 62.5 | |
| | 1904 | 308 | 16,696 | 236 | 1,734 | 14,726 | 16,226 | 27,345 | 1,993 | 5,577 | 19,645 | 33,946 | 14,301 | 51.4 | 39.4 | |
| | 1899 | 246 | ..... | ..... | 1,092 | 9,727 | 10,421 | 18,152 | 1,342 | 3,658 | 14,191 | 24,235 | 10,164 | ..... | ..... |  |
| Paper patterns..... | 1909 | 27 | 1,755 | 22 | 812 | 921 | 751 | 4,578 | 675 | 407 | 646 | 2,611 | 1,965 | -14.9 | 15.3 | |
| | 1904 | 26 | 1,790 | 15 | 693 | 1,082 | 38 | 2,237 | 490 | 445 | 337 | 2,285 | 1,928 | 26.6 | 203.0 | |
| | 1899 | 15 | ..... | ..... | 92 | 835 | 9 | 256 | 72 | 262 | 125 | 562 | 437 | ..... | ..... |  |
| Patent medicines and compounds and drug- gists' preparations..... | 1909 | 3,642 | 41,101 | 2,802 | 15,404 | 22,895 | 25,659 | 99,942 | 17,007 | 9,897 | 50,376 | 141,942 | 91,566 | 11.8 | 20.9 | |
| | 1904 | 2,777 | 32,248 | 2,293 | 9,483 | 20,472 | 17,008 | 75,007 | 9,975 | 7,913 | 29,494 | 117,496 | 77,942 | 7.9 | 32.3 | |
| | 1899 | 2,154 | ..... | ..... | 8,004 | 19,028 | 12,707 | 56,173 | 8,265 | 6,910 | 31,960 | 88,791 | 56,841 | ..... | ..... |  |
| Paving materials..... | 1909 | 49 | 1,781 | 31 | 281 | 1,419 | 5,757 | 11,410 | 373 | 750 | 3,478 | 6,229 | 2,751 | -26.1 | 23.8 | |
| | 1904 | 54 | 2,106 | 30 | 157 | 1,919 | 5,156 | 5,218 | 197 | 953 | 2,666 | 5,693 | 2,967 | -21.2 | 27.9 | |
| | 1899 | 99 | ..... | ..... | 173 | 2,436 | 34,367 | 13,464 | 184 | 1,144 | 1,582 | 3,936 | 2,354 | ..... | ..... |  |
| Peanuts, grading, roast- ing, cleaning, and shell- ing. ¹ | 1909 | 46 | 2,177 | 35 | 193 | 1,949 | 2,827 | 3,646 | 209 | 351 | 8,612 | 9,737 | 1,125 | 43.7 | 34.1 | |
| | 1904 | 30 | 1,490 | 18 | 116 | 1,856 | 1,602 | 1,169 | 122 | 205 | 6,324 | 7,251 | 937 | ..... | ..... |  |
| Pencils, lead..... | 1909 | 11 | 4,513 | 4 | 375 | 4,134 | 3,448 | 7,867 | 697 | 1,712 | 3,596 | 7,379 | 3,783 | 34.9 | 60.7 | |
| | 1904 | 8 | 3,351 | 3 | 283 | 3,065 | 2,625 | 4,981 | 396 | 1,059 | 1,804 | 4,426 | 2,622 | 41.8 | 99.2 | |
| | 1899 | 7 | ..... | ..... | 81 | 2,162 | 1,360 | 2,227 | 112 | 683 | 1,031 | 2,222 | 1,191 | ..... | ..... |  |
| Pens, fountain, stylo- graphic, and gold..... | 1909 | 65 | 1,820 | 51 | 544 | 1,225 | 569 | 3,121 | 554 | 712 | 2,246 | 4,729 | 2,483 | 31.2 | 78.8 | |
| | 1904 | 49 | 1,196 | 39 | 224 | 933 | 349 | 1,545 | 198 | 533 | 1,166 | 2,774 | 1,608 | 34.1 | 62.6 | |
| | 1899 | 45 | ..... | ..... | 146 | 696 | 527 | 1,087 | 148 | 371 | 664 | 1,706 | 1,042 | ..... | ..... |  |
| Pens, steel..... | 1909 | 5 | 755 | ..... | 56 | 699 | 244 | 804 | 86 | 220 | 95 | 577 | 482 | 5.4 | 21.7 | |
| | 1904 | 5 | 736 | 1 | 72 | 663 | 294 | 576 | 60 | 205 | 163 | 474 | 371 | 49.2 | 61.2 | |
| | 1899 | 3 | ..... | ..... | 13 | 473 | 138 | 357 | 21 | 138 | 52 | 294 | 242 | ..... | ..... |  |
| Petroleum, refining..... | 1909 | 147 | 16,640 | 42 | 2,660 | 13,929 | 90,268 | 181,916 | 3,929 | 9,830 | 199,273 | 236,468 | 37,725 | -16.9 | 35.4 | |
| | 1904 | 98 | 18,768 | 24 | 1,974 | 16,770 | 46,019 | 136,281 | 2,724 | 9,969 | 139,387 | 178,608 | 39,619 | 37.4 | 41.2 | |
| | 1899 | 67 | ..... | ..... | 1,201 | 12,199 | 36,127 | 95,328 | 1,811 | 6,717 | 102,869 | 125,929 | 21,679 | ..... | ..... |  |
| Phonographs and graph- ophones..... | 1909 | 18 | 5,928 | 2 | 727 | 5,199 | 6,371 | 14,363 | 945 | 2,841 | 3,090 | 11,726 | 8,627 | 53.0 | 14.5 | |
| | 1904 | 14 | 3,940 | 6 | 537 | 3,397 | 2,522 | 8,741 | 666 | 1,694 | 4,161 | 10,237 | 6,076 | 188.1 | 355.8 | |
| | 1899 | 11 | ..... | ..... | 144 | 1,267 | 1,082 | 3,348 | 179 | 608 | 828 | 2,246 | 1,418 | ..... | ..... |  |
| Photographic apparatus and materials..... | 1909 | 103 | 6,596 | 59 | 1,342 | 5,195 | 8,637 | 18,918 | 1,462 | 3,067 | 6,708 | 22,561 | 15,853 | 36.3 | 73.2 | |
| | 1904 | 130 | 5,041 | 74 | 1,155 | 3,812 | 5,061 | 7,720 | 1,169 | 1,796 | 4,162 | 13,623 | 8,601 | 19.7 | 67.0 | |
| | 1899 | 153 | ..... | ..... | 469 | 3,444 | 3,412 | 5,518 | 453 | 1,443 | 2,378 | 7,799 | 4,421 | ..... | ..... |  |
| Photo-engraving..... | 1909 | 313 | 7,277 | 233 | 1,701 | 5,343 | 2,638 | 5,474 | 1,849 | 4,750 | 2,124 | 11,624 | 9,490 | 37.8 | 59.9 | |
| | 1904 | 223 | 5,071 | 227 | 968 | 3,876 | 1,925 | 4,671 | 934 | 2,916 | 1,363 | 7,926 | 5,965 | 44.0 | 73.5 | |
| | 1899 | 203 | ..... | ..... | 484 | 2,691 | 1,040 | 1,994 | 450 | 1,750 | 725 | 4,190 | 3,463 | ..... | ..... |  |
| Pipes, tobacco..... | 1909 | 62 | 3,090 | 70 | 245 | 2,775 | 1,506 | 3,528 | 283 | 1,255 | 2,459 | 2,512 | 2,535 | 42.5 | 57.4 | |
| | 1904 | 68 | 2,111 | 82 | 82 | 1,947 | 1,058 | 1,256 | 81 | 831 | 1,354 | 2,494 | 1,480 | 22.8 | 14.6 | |
| | 1899 | 98 | ..... | ..... | 120 | 1,585 | 855 | 1,111 | 109 | 738 | 1,106 | 2,472 | 1,966 | ..... | ..... |  |
| Pottery, terra-cotta, and fire-clay products..... | 1909 | 822 | 61,022 | 452 | 4,402 | 56,168 | 110,017 | 141,350 | 5,813 | 29,733 | 21,911 | 70,119 | 54,208 | 7.1 | 18.6 | |
| | 1904 | 873 | 59,730 | 550 | 3,752 | 52,428 | 104,918 | 110,926 | 4,628 | 25,178 | 16,591 | 64,201 | 47,610 | 19.9 | 45.0 | |
| | 1899 | 1,000 | ..... | ..... | 2,777 | 43,714 | 75,802 | 65,932 | 3,012 | 17,692 | 11,315 | 44,263 | 32,248 | ..... | ..... |  |
| Printing and publishing.. | 1909 | 31,445 | 388,466 | 30,424 | 99,808 | 258,434 | 267,763 | 588,346 | 103,458 | 164,028 | 201,775 | 737,876 | 536,101 | 18.0 | 33.6 | |
| | 1904 | 27,793 | 316,047 | 28,368 | 68,562 | 219,087 | 166,380 | 432,854 | 67,748 | 127,196 | 142,534 | 552,473 | 409,959 | 12.2 | 39.8 | |
| | 1899 | 23,814 | ..... | ..... | 40,685 | 195,280 | 119,775 | 333,003 | 99,475 | 99,816 | 193,634 | 395,187 | 291,533 | ..... | ..... |  |
| Pulp goods..... | 1909 | 14 | 882 | 1 | 98 | 783 | 3,125 | 2,680 | 124 | 377 | 971 | 1,770 | 799 | 12.5 | 20.7 | |
| | 1904 | 17 | 759 | 7 | 56 | 696 | 2,368 | 3,198 | 83 | 284 | 719 | 1,467 | 748 | 0.7 | 15.3 | |
| | 1899 | 22 | ..... | ..... | 75 | 691 | 1,314 | 2,317 | 92 | 284 | 647 | 1,267 | 620 | ..... | ..... |  |

¹ Included in "coffee and spice, roasting and grinding," in 1899.

ABSTRACT OF THE CENSUS—MANUFACTURES.

COMPARATIVE SUMMARY FOR THE UNITED STATES, BY SPECIFIED INDUSTRIES: 1909, 1904, AND 1899—Continued.

[See explanatory notes on the first page of this table.]

| Table 110—Contd. | | | | | | | | | | | | | | | |
|--|----------------------|---|------------------------------|---|-----------------------------|---|------------------------------|-------------------------------|----------------------------|----------------------------|---------------------------------|---------------------------------|--|---|-------------------------------|
| INDUSTRY. | Cen- sus. | Num- ber of estab- lish- ments. | PERSONS ENGAGED IN INDUSTRY. | | | | Primary horse- power. | Capital. | Sala- ries. | Wages. | Cost of materials. | Value of products. | Value added by manu- facture (value of products less cost of mate- rials). | PER CENT OF INCREASE. | |
| | | | Total. | Pro- pri- etors and firm mem- bers. | Salaried em- ployees. | Wage earners (average number). | | | | | | | | Wage earners (aver- age num- ber). | Value of prod- ucts. |
| | | | | | | | | | | | | | | | |
| Pumps, not including steam pumps. | 1909 1904 1899 | 102 115 130 | 2,623 1,721 | 87 113 | 400 204 95 | 2,136 1,404 632 | 4,214 2,569 1,245 | \$6,018 3,230 1,201 | \$420 215 84 | \$1,258 719 247 | \$2,487 1,193 638 | \$5,583 2,853 1,342 | \$3,096 1,660 704 | 52.1 122.2 | 95.7 112.6 |
| Rice, cleaning and pol- ishing. | 1909 1904 1899 | 71 74 80 | 1,777 1,961 | 38 33 | 500 436 169 | 1,239 1,492 651 | 19,510 15,866 7,546 | 13,347 8,821 2,601 | 613 549 182 | 564 641 200 | 19,501 13,315 7,570 | 22,371 16,267 8,724 | 2,870 2,982 1,148 | -17.0 129.2 | 37.3 86.8 |
| Roofing materials..... | 1909 1904 1899 | 117 307 267 | 3,530 10,162 | 46 314 | 1,019 1,029 695 | 2,465 8,819 7,593 | 9,481 23,022 18,217 | 15,349 16,925 10,814 | 1,381 1,162 663 | 1,339 4,008 3,072 | 12,458 10,842 6,886 | 19,204 19,871 13,691 | 6,746 9,029 6,805 | -72.0 16.1 | -3.4 45.1 |
| Rubber goods, not else- where specified. | 1909 1904 1899 | 227 224 261 | 31,284 23,651 | 102 103 | 4,661 2,364 1,825 | 26,521 21,184 20,404 | 79,062 48,381 40,835 | 98,507 46,298 39,302 | 5,406 2,857 2,210 | 14,120 9,412 8,082 | 82,192 38,912 33,482 | 128,436 62,996 52,022 | 46,244 24,084 19,140 | 25.2 3.8 | 103.9 19.7 |
| Rules, ivory and wood... | 1909 1904 1899 | 9 13 11 | 127 177 | 9 13 | 9 15 14 | 109 149 213 | 167 318 303 | 104 253 203 | 11 15 12 | 51 55 67 | 31 55 73 | 144 249 208 | 118 194 135 | -26.8 -30.0 | -42.2 19.7 |
| Safes and vaults..... | 1909 1904 1899 | 42 31 35 | 4,060 3,918 | 8 15 | 709 415 272 | 3,343 3,488 2,033 | 5,546 4,090 2,209 | 8,944 7,326 5,480 | 1,058 723 283 | 2,072 2,162 1,017 | 3,443 3,211 1,689 | 8,491 7,861 3,928 | 5,048 4,650 2,239 | -4.2 71.6 | 8.0 100.1 |
| Salt..... | 1909 1904 1899 | 124 146 159 | 5,580 5,171 | 74 87 | 570 418 406 | 4,036 4,666 4,774 | 27,263 19,434 23,865 | 20,012 25,586 27,123 | 710 487 500 | 2,531 2,066 1,911 | 5,203 4,166 3,336 | 11,328 9,438 7,967 | 6,125 5,272 4,631 | 5.8 -2.3 | 20.0 18.5 |
| Sand and emery paper and cloth. | 1909 1904 1899 | 10 8 9 | 779 356 | 9 11 | 150 40 63 | 611 305 274 | 3,351 1,133 898 | 4,400 1,206 1,372 | 210 78 98 | 370 183 144 | 2,382 1,055 681 | 4,358 1,477 1,176 | 1,976 422 495 | 100.3 11.3 | 195.1 25.6 |
| Saws..... | 1909 1904 1899 | 96 83 96 | 5,757 5,301 | 84 75 | 841 576 312 | 4,832 4,650 3,215 | 11,852 7,491 5,493 | 14,855 11,288 8,599 | 966 623 320 | 2,856 2,707 1,693 | 4,912 4,036 2,600 | 11,536 9,820 6,444 | 6,624 5,784 3,844 | 3.9 44.6 | 17.5 52.4 |
| Scales and balances..... | 1909 1904 1899 | 87 85 80 | 4,275 3,641 | 44 77 | 672 431 305 | 3,559 3,133 2,775 | 6,183 3,251 2,466 | 10,183 8,513 6,308 | 815 477 297 | 2,186 1,755 1,437 | 2,704 1,033 1,533 | 8,786 6,003 5,240 | 6,082 4,370 3,707 | 13.6 12.9 | 45.4 14.6 |
| Screws, machine..... | 1909 1904 1899 | 43 26 25 | 1,893 2,189 | 32 15 | 164 209 108 | 1,667 1,965 1,557 | 3,310 3,201 1,407 | 3,728 4,133 2,467 | 199 244 126 | 970 942 703 | 1,160 951 797 | 3,014 2,712 2,059 | 1,854 1,761 1,262 | -15.2 26.2 | 11.1 31.7 |
| Screws, wood..... | 1909 1904 1899 | 11 7 8 | 3,758 1,647 | 1 1 | 293 158 139 | 3,464 1,488 1,970 | 5,618 3,715 3,490 | 9,570 5,069 5,465 | 375 193 160 | 1,454 556 721 | 2,309 732 923 | 6,199 2,134 2,600 | 3,890 1,402 1,677 | 132.8 -24.5 | 190.5 -17.9 |
| Sewing machines, cases, and attachments. | 1909 1904 1899 | 47 54 64 | 20,550 18,064 | 14 19 | 1,246 924 704 | 19,296 17,121 13,365 | 19,426 17,162 10,069 | 33,104 32,583 20,804 | 1,423 1,152 933 | 11,102 9,493 7,331 | 11,455 10,701 9,458 | 28,262 26,142 21,125 | 16,807 15,441 11,667 | 12.7 28.1 | 8.1 23.7 |
| Shipbuilding, including boat building. | 1909 1904 1899 | 1,353 1,097 1,107 | 44,949 54,424 | 1,463 1,190 | 2,980 2,480 1,405 | 40,506 50,754 46,747 | 88,063 78,127 61,797 | 120,118 121,024 77,341 | 4,035 3,340 2,007 | 25,268 20,241 24,825 | 31,214 37,403 33,475 | 73,360 82,769 74,532 | 42,146 45,806 41,057 | -20.2 8.6 | -11.4 11.1 |
| Shoddy..... | 1909 1904 1899 | 88 97 105 | 2,320 2,371 | 83 110 | 196 172 139 | 2,041 2,089 1,926 | 13,820 12,244 11,455 | 6,887 5,804 5,273 | 290 245 107 | 907 835 749 | 5,001 6,056 4,875 | 7,446 8,406 6,731 | 2,445 2,350 1,856 | -2.3 8.5 | -11.4 24.9 |
| Show cases..... | 1909 1904 1899 | 149 141 102 | 3,943 3,522 | 154 135 | 399 305 106 | 3,390 3,082 1,363 | 4,746 4,087 1,232 | 5,369 3,143 1,153 | 505 330 88 | 2,017 1,681 708 | 3,140 2,374 1,058 | 7,167 5,722 2,468 | 4,027 3,348 1,410 | 10.0 126.1 | 25.3 131.8 |
| Signs and advertising novelties. ¹ | 1909 | 288 | 7,277 | 211 | 1,526 | 5,540 | 3,790 | 9,647 | 1,476 | 3,105 | 4,709 | 13,546 | 8,837 | ..... | ..... |
| Silk and silk goods, in- cluding throwsters. | 1909 1904 1899 | 852 624 483 | 105,238 84,153 | 664 625 | 5,537 4,027 2,057 | 99,037 79,601 65,416 | 97,947 71,760 57,397 | 152,158 109,557 81,082 | 7,527 4,742 3,134 | 38,570 26,768 20,982 | 107,767 75,801 62,407 | 196,912 133,288 107,256 | 89,145 57,427 44,849 | 24.4 21.7 | 47.7 24.3 |
| Silverware and plated ware. | 1909 1904 1899 | 183 168 169 | 18,774 16,305 | 114 120 | 2,050 1,324 1,129 | 16,610 14,861 12,205 | 15,183 12,873 8,486 | 46,759 37,732 30,028 | 2,745 1,730 1,457 | 10,282 8,025 6,531 | 18,332 14,459 11,659 | 42,229 32,840 26,114 | 23,897 18,381 14,455 | 11.8 21.8 | 28.6 25.8 |
| Slaughtering and meat packing. | 1909 1904 1899 | 1,641 1,221 1,080 | 108,716 88,819 | 1,659 1,324 | 17,329 12,096 10,317 | 89,728 75,599 69,264 | 208,707 119,311 87,060 | 383,249 240,419 190,209 | 20,054 13,453 10,211 | 51,045 41,067 33,846 | 1,202,828 811,426 685,310 | 1,370,568 922,038 788,368 | 167,740 110,612 103,058 | 19.0 8.9 | 48.6 17.0 |
| Smelting and refining, copper. | 1909 1904 1899 | 38 40 47 | 16,832 13,592 | 7 1 | 1,197 899 488 | 15,028 12,752 11,324 | 158,126 76,524 61,630 | 111,443 76,825 53,063 | 2,419 1,527 955 | 13,396 10,827 8,529 | 333,532 240,737 122,174 | 378,806 270,780 165,132 | 45,274 44,043 42,958 | 22.6 12.6 | 57.3 45.8 |
| Smelting and refining, lead. | 1909 1904 1899 | 23 32 39 | 8,059 8,192 | 5 | 635 524 425 | 7,424 7,573 8,319 | 26,954 25,667 16,342 | 132,310 93,823 72,149 | 1,476 888 755 | 5,431 5,375 5,089 | 151,963 108,958 144,195 | 107,400 185,827 175,460 | 15,443 16,869 31,271 | -2.0 -9.0 | -9.9 5.9 |
| Smelting and refining, zinc. | 1909 1904 1899 | 29 31 31 | 7,156 6,884 | 3 2 | 498 354 208 | 6,655 6,528 4,899 | 21,457 18,404 11,145 | 27,700 23,702 14,142 | 993 581 440 | 4,210 3,856 2,356 | 25,230 17,028 13,286 | 34,200 24,791 18,188 | 8,976 7,763 4,902 | 1.9 34.1 | 38.0 36.3 |
| Smelting and refining, not from the ore. | 1909 1904 1899 | 89 65 61 | 2,596 1,994 | 73 57 | 376 225 203 | 2,147 1,712 983 | 10,705 7,111 8,633 | 13,834 9,807 5,201 | 570 354 229 | 1,281 995 532 | 23,162 13,700 5,900 | 28,072 17,403 7,785 | 4,910 3,643 1,885 | 25.4 74.2 | 61.3 123.5 |

* Included in other classifications in 1904 and 1899.

STATES, CITIES, AND INDUSTRIES.

523

COMPARATIVE SUMMARY FOR THE UNITED STATES, BY SPECIFIED INDUSTRIES: 1909, 1904, AND 1899—Continued.

[See explanatory notes on the first page of this table.]

| Table 110—Contd. | | Cen- sus. | Num- ber of estab- lish- ments. | PERSONS ENGAGED IN INDUSTRY. | | | | | Primary horse- power. | Capital. | Sala- ries. | Wages. | Cost of materials. | Value of products. | Value added by manu- facture (value of products less cost of mate- rials). | PER CENT OF INCREASE. | |
|---|--------|--------------|---|---|-----------------------------|---|---|----------------------------|-----------------------------|----------|----------------|-----------|-----------------------|-----------------------|--|--------------------------|--|
| INDUSTRY. | Total. | | | Pro- pri- etors and firm mem- bers. | Salaried em- ployees. | Wage earners (average number). | Wage earners (aver- age num- ber). | Value of prod- ucts. | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | Expressed in thousands. | |
| Soap ¹ | 1909 | 420 | 18,393 | 329 | 5,065 | 12,999 | 28,360 | \$71,951 | \$5,506 | \$6,227 | \$72,179 | \$111,358 | \$39,179 | 17.7 | 63.1 | | |
| | 1904 | 430 | 14,501 | 399 | 3,058 | 11,044 | 20,228 | 54,816 | 3,503 | 4,763 | 43,626 | 68,275 | 24,649 | 16.4 | 28.3 | | |
| | 1899 | 553 | | | 2,738 | 9,457 | 17,514 | 38,068 | 2,777 | 3,755 | 33,143 | 53,231 | 20,098 | | | | |
| Soda-water apparatus..... | 1909 | 63 | 2,399 | 40 | 562 | 1,797 | 2,894 | 8,589 | 624 | 1,239 | 2,443 | 6,556 | 4.11 | 22.3 | 41.5 | | |
| | 1904 | 37 | 1,829 | 27 | 333 | 1,499 | 1,533 | 3,415 | 296 | 835 | 1,924 | 4,634 | 2,710 | 12.5 | 53.7 | | |
| | 1899 | 30 | | | 227 | 963 | 1,183 | 4,202 | 244 | 550 | 997 | 3,015 | 2,018 | | | | |
| Sporting and athletic goods. | 1909 | 180 | 5,993 | 155 | 517 | 5,321 | 3,243 | 6,617 | 617 | 2,165 | 5,565 | 11,062 | 5,487 | 24.9 | 57.2 | | |
| | 1904 | 152 | 4,757 | 136 | 361 | 4,290 | 2,995 | 4,249 | 319 | 1,641 | 2,963 | 7,032 | 4,069 | 51.5 | 93.8 | | |
| | 1899 | 143 | | | 168 | 2,225 | 1,133 | 2,015 | 167 | 810 | 1,802 | 3,628 | 1,826 | | | | |
| Springs, steel, car and carriage. | 1909 | 54 | 3,573 | 24 | 353 | 3,196 | 7,349 | 8,784 | 590 | 1,853 | 4,727 | 9,095 | 4,276 | 29.1 | 56.9 | | |
| | 1904 | 52 | 2,774 | 28 | 270 | 2,476 | 5,510 | 4,016 | 353 | 1,243 | 2,742 | 5,741 | 2,999 | 17.8 | 6.9 | | |
| | 1899 | 48 | | | 166 | 2,102 | 3,185 | 4,684 | 275 | 1,061 | 3,025 | 5,690 | 2,665 | | | | |
| Stationery goods, not elsewhere specified. | 1909 | 153 | 7,938 | 103 | 1,629 | 6,206 | 6,842 | 13,508 | 1,897 | 2,736 | 7,744 | 16,647 | 8,902 | 44.5 | 87.7 | | |
| | 1904 | 143 | 5,095 | 115 | 685 | 4,295 | 3,396 | 6,929 | 751 | 1,500 | 3,920 | 8,867 | 4,947 | 41.7 | 75.0 | | |
| | 1899 | 113 | | | 453 | 3,032 | 1,706 | 4,495 | 412 | 958 | 2,128 | 5,066 | 2,938 | | | | |
| Statuary and art goods ² | 1909 | 194 | 2,172 | 275 | 198 | 1,699 | 462 | 2,221 | 225 | 1,339 | 689 | 3,442 | 2,762 | 12.7 | 42.4 | | |
| | 1904 | 135 | 1,812 | 191 | 114 | 1,507 | 466 | 1,669 | 127 | 1,030 | 392 | 2,417 | 2,025 | | | | |
| Steam packing..... | 1909 | 153 | 4,968 | 82 | 1,233 | 3,648 | 11,129 | 14,126 | 1,356 | 1,811 | 6,650 | 12,369 | 5,510 | 33.4 | 35.8 | | |
| | 1904 | 106 | 3,240 | 59 | 450 | 2,734 | 8,846 | 12,253 | 594 | 1,273 | 3,890 | 8,952 | 5,065 | 138.4 | 136.2 | | |
| | 1899 | 97 | | | 290 | 1,147 | 4,488 | 2,691 | 326 | 525 | 1,546 | 3,494 | 1,943 | | | | |
| Stereotyping and electro- typing. | 1909 | 174 | 3,661 | 133 | 678 | 2,850 | 4,076 | 3,826 | 800 | 2,312 | 1,765 | 6,394 | 4,619 | 6.4 | 27.6 | | |
| | 1904 | 146 | 3,301 | 132 | 490 | 2,679 | 2,878 | 3,298 | 517 | 1,993 | 1,692 | 5,005 | 3,973 | 11.3 | 31.7 | | |
| | 1889 | 140 | | | 330 | 2,408 | 1,470 | 2,389 | 312 | 1,459 | 767 | 3,772 | 3,005 | | | | |
| Stoves and furnaces, in- cluding gas and oil stoves. ³ | 1909 | 576 | 42,921 | 244 | 5,547 | 37,130 | 45,524 | 86,944 | 6,975 | 22,944 | 29,338 | 78,803 | 49,515 | 11.2 | 26.9 | | |
| | 1904 | 494 | 37,292 | 306 | 3,582 | 33,404 | 32,017 | 62,953 | 4,499 | 19,770 | 22,271 | 62,133 | 39,862 | | | | |
| Sugar and molasses, not including beet sugar. ⁴ | 1909 | 233 | 15,658 | 204 | 1,923 | 13,526 | 160,603 | 153,167 | 2,392 | 7,484 | 247,588 | 279,249 | 31,666 | -0.2 | 9.7 | | |
| | 1904 | 344 | 15,799 | 364 | 1,886 | 13,549 | 140,650 | 165,468 | 2,154 | 7,576 | 244,753 | 277,285 | 32,532 | -4.1 | 15.7 | | |
| | 1899 | 657 | | | 1,867 | 14,129 | 152,569 | 184,033 | 1,682 | 6,918 | 221,285 | 269,711 | 18,326 | | | | |
| Sulphuric, nitric, and mixed acids. ⁵ | 1909 | 42 | 2,582 | ..... | 330 | 2,252 | 6,494 | 18,726 | 551 | 1,495 | 5,386 | 9,884 | 4,498 | -3.0 | 9.2 | | |
| | 1904 | 32 | 2,757 | 2 | 308 | 2,447 | 5,416 | 12,762 | 556 | 1,505 | 4,973 | 9,053 | 4,080 | | | | |
| Surgical appliances and artificial limbs. | 1909 | 324 | 5,805 | 316 | 1,248 | 4,241 | 5,752 | 11,045 | 1,488 | 2,129 | 5,372 | 12,399 | 7,027 | 34.5 | 79.5 | | |
| | 1904 | 234 | 4,049 | 289 | 607 | 3,153 | 3,214 | 5,825 | 594 | 1,376 | 2,896 | 7,299 | 4,493 | 79.3 | 55.3 | | |
| | 1899 | 306 | | | 440 | 1,788 | 1,254 | 2,778 | 414 | 767 | 1,418 | 4,682 | 3,264 | | | | |
| Tin plate and terneplate. | 1909 | 31 | 5,846 | 4 | 490 | 5,352 | 8,154 | 10,995 | 620 | 3,315 | 41,889 | 47,970 | 6,081 | 19.4 | 39.0 | | |
| | 1904 | 36 | 5,132 | 1 | 284 | 4,847 | 8,990 | 10,813 | 310 | 2,383 | 21,576 | 24,253 | 3,907 | 22.0 | 19.6 | | |
| | 1899 | 57 | | | 333 | 3,671 | 3,515 | 6,650 | 291 | 1,890 | 26,728 | 31,992 | 5,194 | | | | |
| Tin foil..... | 1909 | 10 | 762 | 8 | 71 | 683 | 1,099 | 2,505 | 92 | 304 | 2,277 | 3,419 | 1,142 | -19.8 | 22.3 | | |
| | 1904 | 14 | 847 | 11 | 70 | 766 | 1,388 | 1,918 | 86 | 303 | 1,585 | 2,795 | 907 | 31.6 | 75.5 | | |
| | 1899 | 15 | | | 45 | 582 | 854 | 2,094 | 59 | 228 | 1,074 | 1,593 | 519 | | | | |
| Tobacco manufactures..... | 1909 | 15,822 | 197,637 | 17,634 | 13,193 | 166,810 | 28,514 | 245,660 | 16,779 | 69,355 | 177,186 | 416,695 | 239,509 | 4.6 | 25.8 | | |
| | 1904 | 16,827 | 187,652 | 19,011 | 9,235 | 159,406 | 24,604 | 323,982 | 8,800 | 62,639 | 126,098 | 331,111 | 205,625 | 20.3 | 25.6 | | |
| | 1899 | 14,959 | | | 7,836 | 132,526 | 22,296 | 111,517 | 8,593 | 47,975 | 92,867 | 263,713 | 170,849 | | | | |
| Toys and games..... | 1909 | 226 | 6,072 | 185 | 582 | 5,305 | 5,323 | 6,541 | 661 | 2,227 | 3,554 | 8,264 | 4,719 | 22.5 | 45.2 | | |
| | 1904 | 161 | 4,792 | 133 | 329 | 4,330 | 4,757 | 4,831 | 366 | 1,615 | 2,289 | 3,289 | 2,966 | 29.6 | 39.1 | | |
| | 1899 | 169 | | | 204 | 3,316 | 3,155 | 3,279 | 184 | 1,119 | 1,665 | 4,010 | 2,345 | | | | |
| Turpentine and rosin..... | 1909 | 1,585 | 44,524 | 2,567 | 2,446 | 39,511 | 4,129 | 12,401 | 1,655 | 9,263 | 4,911 | 25,295 | 20,384 | 18.4 | 5.7 | | |
| | 1904 | 1,287 | 37,526 | 1,997 | 2,147 | 33,382 | 1,175 | 6,961 | 1,152 | 8,353 | 3,775 | 23,987 | 20,162 | -20.3 | 17.7 | | |
| | 1899 | 1,503 | | | 1,889 | 41,864 | 866 | 11,843 | 779 | 8,394 | 6,186 | 26,345 | 14,159 | | | | |
| Type founding and print- ing materials. | 1909 | 122 | 2,597 | 78 | 493 | 2,026 | 1,948 | 6,793 | 560 | 1,191 | 1,772 | 4,703 | 2,931 | 12.4 | 19.5 | | |
| | 1904 | 98 | 2,255 | 84 | 368 | 1,803 | 1,497 | 5,926 | 357 | 1,123 | 1,119 | 3,905 | 2,816 | -9.1 | 0.1 | | |
| | 1899 | 92 | | | 247 | 1,984 | 1,381 | 3,175 | 274 | 1,036 | 1,270 | 2,991 | 2,661 | | | | |
| Typewriters and supplies | 1909 | 89 | 12,101 | 34 | 2,489 | 9,578 | 6,845 | 26,309 | 2,707 | 6,221 | 4,677 | 19,719 | 15,642 | 53.7 | 85.3 | | |
| | 1904 | 66 | 7,509 | 29 | 1,248 | 6,232 | 4,455 | 16,642 | 1,249 | 2,469 | 1,870 | 10,640 | 8,770 | 43.3 | 53.5 | | |
| | 1899 | 47 | | | 532 | 4,340 | 2,272 | 8,400 | 480 | 2,404 | 1,462 | 4,962 | 5,530 | | | | |
| Umbrellas and canes..... | 1909 | 256 | 6,505 | 299 | 734 | 5,472 | 2,413 | 9,556 | 915 | 2,253 | 10,056 | 15,894 | 5,808 | 1.6 | 19.3 | | |
| | 1904 | 204 | 6,155 | 242 | 527 | 5,386 | 2,122 | 8,961 | 474 | 1,826 | 8,250 | 13,069 | 5,046 | -4.5 | -2.7 | | |
| | 1899 | 202 | | | 587 | 5,640 | 1,457 | 4,605 | 504 | 1,869 | 8,381 | 12,669 | 5,288 | | | | |
| Upholstering materials... | 1909 | 230 | 4,777 | 214 | 496 | 4,067 | 17,456 | 10,297 | 587 | 1,669 | 8,669 | 13,054 | 4,965 | -13.7 | 3.6 | | |
| | 1904 | 236 | 5,405 | 244 | 449 | 4,712 | 15,604 | 9,263 | 526 | 1,867 | 7,977 | 12,678 | 4,701 | -7.6 | 26.2 | | |
| | 1899 | 270 | | | 358 | 5,098 | 11,351 | 7,594 | 364 | 1,715 | 5,882 | 10,048 | 4,166 | | | | |
| Vault lights and ventila- tors. | 1909 | 37 | 453 | 27 | 99 | 327 | 234 | 607 | 109 | 228 | 328 | 957 | 619 | 47.3 | 97.7 | | |
| | 1904 | 24 | 278 | 28 | 28 | 222 | 174 | 241 | 31 | 154 | 161 | 484 | 322 | 60.9 | 43.2 | | |
| | 1899 | 14 | | | 11 | 138 | 103 | 121 | 13 | 81 | 141 | 333 | 197 | | | | |
| Vinegar and cider..... | 1909 | 963 | 3,073 | 1,050 | 481 | 1,542 | 16,681 | 10,879 | 539 | 723 | 4,964 | 8,448 | 3,484 | 0.9 | 16.3 | | |
| | 1904 | 568 | 2,514 | 645 | 341 | 1,528 | 10,556 | 7,520 | 359 | 725 | 3,852 | 7,265 | 3,413 | -1.9 | 22.5 | | |
| | 1899 | 613 | | | 451 | 1,557 | 16,849 | 5,630 | 391 | 652 | 3,134 | 5,932 | 2,798 | | | | |
| Wall paper..... | 1909 | 45 | 4,746 | 10 | 699 | 4,037 | 5,680 | 14,153 | 1,054 | 2,639 | 7,623 | 14,449 | 6,826 | 3.2 | 14.3 | | |
| | 1904 | 44 | 4,425 | 15 | 497 | 3,913 | 4,867 | 12,354 | 692 | 1,868 | 6,658 | 12,657 | 5,979 | -6.2 | 18.5 | | |
| | 1899 | 51 | | | 512 | 4,172 | 4,573 | 8,890 | 817 | 2,074 | 6,073 | 10,663 | 4,596 | | | | |

¹ Includes "candles" in 1899.² Included in other classifications in 1899.³ "Stoves and furnaces, not including gas and oil stoves," included in "foundry and machine-shop products" in 1899.⁴ Includes 214 establishments reported as "sugar and molasses" and 19 as "sugar, refining, not including beet sugar," in 1909.⁵ Included in "chemicals" in 1899.

ABSTRACT OF THE CENSUS—MANUFACTURES.

COMPARATIVE SUMMARY FOR THE UNITED STATES, BY SPECIFIED INDUSTRIES: 1909, 1904, AND 1899—Continued.

[See explanatory notes on the first page of this table.]

| Table 110--Contd. | | | PERSONS ENGAGED IN INDUSTRY. | | | | Primary horse-power. | Capital. | Sala-ries. | Wages. | Cost of materials. | Value of products. | Value added by manu- facture (value of products less cost of mate- rials). | PER CENT OF INCREASE. | |
|---|--------------|-------------------------------------|------------------------------|---|--------------------------|---|----------------------|----------|------------|---------|--------------------|--------------------|---|---|-----------------------|
| INDUSTRY. | Cen- sus. | Number of estab- lish- ments. | Total. | Pro- pri- etors and firm mem- bers. | Salaried em- ployees. | Wage earners (average number). | | | | | | | | Wage earners (aver- age num- ber). | Value of products. |
| | | | | | | | | | | | | | | | |
| Expressed in thousands. | | | | | | | | | | | | | | | |
| Wall plaster ¹ | 1909 | 198 | 5,624 | 60 | 773 | 4,791 | 25,892 | \$16,885 | \$1,049 | \$2,391 | \$6,007 | \$12,804 | \$6,797 | 27.5 | 26.0 |
| | 1904 | 176 | 4,459 | 72 | 629 | 3,758 | 20,054 | 13,204 | 620 | 1,890 | 4,726 | 10,164 | 5,438 | | |
| Washing machines and clothes wringers. | 1909 | 100 | 2,294 | 76 | 383 | 1,835 | 3,351 | 5,318 | 466 | 904 | 2,837 | 5,825 | 2,988 | 13.1 | 51.7 |
| | 1904 | 92 | 1,861 | 68 | 171 | 1,622 | 3,564 | 2,052 | 148 | 684 | 2,213 | 3,839 | 1,626 | 7.5 | 2.8 |
| | 1899 | 118 | | | 104 | 1,509 | 2,732 | 2,405 | 104 | 549 | 2,175 | 3,735 | 1,500 | | |
| Waste..... | 1909 | 53 | 2,129 | 41 | 191 | 1,897 | 4,286 | 6,125 | 290 | 716 | 8,837 | 11,398 | 2,561 | 21.7 | 36.6 |
| | 1904 | 41 | 1,716 | 41 | 116 | 1,559 | 3,803 | 3,586 | 164 | 495 | 6,825 | 8,343 | 1,518 | 42.9 | 71.0 |
| | 1899 | 25 | | | 58 | 1,091 | 2,193 | 2,437 | 85 | 327 | 4,000 | 4,880 | 880 | | |
| Wheelbarrows..... | 1909 | 24 | 775 | 17 | 94 | 664 | 1,486 | 1,510 | 81 | 321 | 715 | 1,625 | 910 | 13.7 | 37.9 |
| | 1904 | 26 | 665 | 12 | 69 | 584 | 1,282 | 1,045 | 76 | 206 | 494 | 1,178 | 684 | 81.9 | 159.5 |
| | 1899 | 15 | | | 31 | 321 | 702 | 514 | 27 | 127 | 180 | 454 | 274 | | |
| Whips..... | 1909 | 57 | 1,946 | 90 | 310 | 1,546 | 1,321 | 3,900 | 323 | 704 | 1,585 | 3,049 | 2,364 | -0.5 | 25.5 |
| | 1904 | 58 | 1,771 | 43 | 174 | 1,554 | 1,068 | 3,363 | 184 | 603 | 1,253 | 3,147 | 1,894 | 20.7 | 15.1 |
| | 1899 | 60 | | | 228 | 1,287 | 818 | 1,894 | 246 | 478 | 1,278 | 2,734 | 1,456 | | |
| Windmills..... | 1909 | 34 | 2,742 | 18 | 387 | 2,337 | 3,301 | 5,636 | 479 | 1,403 | 3,331 | 6,077 | 3,346 | 21.2 | 39.2 |
| | 1904 | 53 | 2,341 | 25 | 387 | 1,929 | 3,694 | 5,837 | 392 | 969 | 2,308 | 4,795 | 2,487 | -5.7 | 10.1 |
| | 1899 | 68 | | | 281 | 2,045 | 2,214 | 4,309 | 250 | 940 | 2,172 | 4,354 | 2,182 | | |
| Window shades and fix- tures. | 1909 | 219 | 4,770 | 194 | 646 | 3,930 | 5,737 | 10,334 | 807 | 1,918 | 12,653 | 18,571 | 5,918 | 49.8 | 107.9 |
| | 1904 | 144 | 3,165 | 132 | 409 | 2,624 | 2,705 | 5,977 | 480 | 1,086 | 5,947 | 8,931 | 2,984 | 45.7 | 10.6 |
| | 1899 | 96 | | | 292 | 1,801 | 1,927 | 5,184 | 323 | 752 | 5,575 | 8,072 | 2,497 | | |
| Wire..... | 1909 | 56 | 19,945 | 15 | 1,846 | 18,084 | 71,959 | 60,157 | 2,199 | 10,316 | 60,543 | 84,486 | 23,943 | 281.8 | 122.8 |
| | 1904 | 25 | 5,325 | 7 | 581 | 4,737 | 25,856 | 14,899 | 793 | 2,859 | 30,093 | 37,014 | 7,911 | 195.5 | 302.4 |
| | 1899 | 29 | | | 94 | 1,603 | 9,079 | 4,242 | 136 | 800 | 7,014 | 9,421 | 2,407 | | |
| Wirework, including wire rope and cable. | 1909 | 611 | 14,094 | 484 | 2,162 | 12,348 | 20,131 | 34,970 | 2,674 | 6,331 | 24,394 | 41,938 | 17,544 | -7.7 | 26.9 |
| | 1904 | 649 | 15,067 | 652 | 1,936 | 13,379 | 18,280 | 26,894 | 2,117 | 6,100 | 17,856 | 33,038 | 15,182 | 46.3 | 66.5 |
| | 1899 | 596 | | | 995 | 9,142 | 12,772 | 16,345 | 940 | 3,894 | 10,813 | 19,840 | 9,027 | | |
| Wood carpet..... | 1909 | 10 | 221 | 9 | 28 | 184 | 269 | 423 | 33 | 138 | 228 | 490 | 262 | -50.7 | -38.8 |
| | 1904 | 20 | 445 | 22 | 50 | 373 | 473 | 330 | 45 | 269 | 351 | 801 | 450 | -38.7 | -24.2 |
| | 1899 | 31 | | | 49 | 608 | 534 | 412 | 35 | 362 | 418 | 1,067 | 639 | | |
| Wood distillation, not in- cluding turpentine and rosin. ² | 1909 | 120 | 3,095 | 56 | 318 | 2,721 | 9,854 | 13,017 | 355 | 1,463 | 5,876 | 9,737 | 3,861 | 19.8 | 24.6 |
| | 1904 | 141 | 2,655 | 82 | 301 | 2,272 | 4,620 | 10,507 | 298 | 1,007 | 4,848 | 7,813 | 2,965 | | |
| Wood preserving..... | 1909 | 53 | 2,875 | 1 | 471 | 2,403 | 10,647 | 12,408 | 517 | 1,066 | 9,328 | 14,099 | 4,771 | 226.1 | 318.6 |
| | 1904 | 26 | 859 | 7 | 115 | 737 | 3,439 | 2,935 | 158 | 315 | 2,463 | 3,368 | 905 | 54.2 | 40.6 |
| | 1899 | 21 | | | 54 | 478 | 1,007 | 1,230 | 57 | 205 | 1,825 | 2,396 | 571 | | |
| Wood, turned and carved. | 1909 | 1,050 | 16,243 | 1,097 | 1,007 | 14,139 | 48,447 | 18,334 | 1,045 | 6,213 | 9,744 | 22,199 | 12,455 | -3.7 | 10.1 |
| | 1904 | 1,007 | 16,837 | 1,226 | 924 | 14,687 | 47,595 | 16,842 | 829 | 6,031 | 8,578 | 20,100 | 11,591 | 27.1 | 40.9 |
| | 1899 | 1,166 | | | 505 | 11,558 | 31,133 | 10,280 | 488 | 4,371 | 5,830 | 14,318 | 8,488 | | |
| Wool pulling..... | 1909 | 37 | 759 | 37 | 91 | 631 | 1,366 | 3,248 | 132 | 387 | 4,103 | 5,181 | 1,078 | -7.3 | 487.4 |
| | 1904 | 34 | 786 | 40 | 65 | 681 | 1,324 | 2,534 | 74 | 305 | 104 | 882 | 778 | 43.4 | 66.1 |
| | 1899 | 34 | | | 35 | 475 | 820 | 945 | 35 | 248 | 54 | 531 | 477 | | |
| Wool scouring..... | 1909 | 28 | 1,202 | 18 | 102 | 1,142 | 6,782 | 3,258 | 143 | 558 | 2,122 | 3,289 | 1,167 | 46.6 | 212.3 |
| | 1904 | 27 | 852 | 18 | 55 | 779 | 3,478 | 1,188 | 78 | 398 | 215 | 1,053 | 838 | 8.2 | 18.3 |
| | 1899 | 25 | | | 45 | 720 | 2,900 | 1,061 | 72 | 339 | 194 | 890 | 696 | | |
| Woolen, worsted, and felt goods, and wool hats. | 1909 | 985 | 175,176 | 732 | 5,722 | 168,722 | 362,209 | 430,579 | 10,097 | 72,427 | 282,878 | 435,979 | 153,101 | 15.0 | 35.5 |
| | 1904 | 1,074 | 152,306 | 958 | 4,593 | 145,755 | 288,069 | 314,081 | 6,781 | 57,073 | 204,613 | 310,348 | 114,735 | 12.3 | 28.4 |
| | 1899 | 1,281 | | | 3,808 | 130,697 | 244,825 | 265,730 | 5,574 | 46,812 | 153,030 | 248,798 | 94,868 | | |
| All other industries ³ | 1909 | 8 | 132 | 11 | 25 | 96 | 136 | 254 | 39 | 67 | 115 | 390 | 275 | -78.0 | -63.1 |
| | 1904 | 15 | 494 | 8 | 50 | 430 | 1,787 | 3,800 | 59 | 263 | 386 | 1,058 | 672 | -64.1 | -60.1 |
| | 1899 | 17 | | | 97 | 1,215 | 2,354 | 4,078 | 113 | 687 | 988 | 2,060 | 1,662 | | |

¹ Included in "lime and cement" in 1899.² Included in "chemicals" in 1899.³ All other industries embrace "Millstones," 1 establishment; "ordnance and accessories," 2; "pulp, from fiber other than wood," 2; "straw goods, not elsewhere specified," 2; and "whalebone cutting," 1, in 1909. "Millstones," 2; "ordnance and accessories," 4; "pulp, from fiber other than wood," 1; "straw goods, not elsewhere specified," 0; "whalebone cutting," 2, in 1904. "Millstones," 3; "ordnance and accessories," 4; "pulp, from fiber other than wood," 3; "straw goods, not elsewhere specified," 4; "whalebone cutting," 3, in 1899.

COMPARATIVE SUMMARY FOR THE UNITED STATES, BY STATES, 1909, 1904, AND 1899.

NOTE.—Primary horsepower includes power generated in manufacturing establishments plus electric and other power rented from outside sources; it does not include electric power generated by primary units of the establishments reporting.

[A minus sign (—) denotes decrease.]

| Table 111 | | Cen- sus. | Num- ber of estab- lish- ments. | PERSONS ENGAGED IN INDUSTRY. | | | | Primary horse- power. | Capital. | Sala- ries. | Wages. | Cost of materials. | Value of products. | Value added by manu- facture (value of products less cost of materials). | PERCENT OF INCREASE. | | |
|-------------------------|--------|--------------|---|---|-----------------------------|---|---|-----------------------------|-----------|----------------|--------------|-----------------------|-----------------------|---|----------------------------|--|--|
| DIVISION AND STATE. | Total. | | | Pro- pri- etors and firm mem- bers. | Salaried em- ployees. | Wage earners (average number). | Wage earners (aver- age num- ber). | | | | | | | | Value of prod- ucts. | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| Expressed in thousands. | | | | | | | | | | | | | | | | | |
| United States.... | 1909 | 268,491 | 7,678,578 | 273,265 | 790,267 | 6,615,046 | 18,675,376 | \$18,428,270 | \$938,575 | \$3,427,838 | \$12,142,791 | \$20,672,652 | \$8,229,261 | 21.0 | 39.7 | | |
| | 1904 | 216,180 | 6,213,612 | 225,673 | 519,556 | 5,468,383 | 13,487,707 | 12,675,581 | 574,439 | 2,610,445 | 8,500,298 | 14,791,999 | 6,229,695 | 16.0 | 29.7 | | |
| | 1899 | 207,514 | | | 384,120 | 4,712,783 | 10,097,893 | 8,975,256 | 380,771 | 2,008,361 | 6,575,851 | 11,400,927 | 4,811,976 | | | | |
| GEOGRAPHIC DIVISIONS: | | | | | | | | | | | | | | | | | |
| New England..... | | | | | | | | | | | | | | | | | |
| | 1909 | 25,351 | 1,212,158 | 24,171 | 86,697 | 1,101,290 | 2,715,121 | 2,503,854 | 112,284 | 557,631 | 1,476,297 | 2,676,965 | 1,193,768 | 17.1 | 31.8 | | |
| | 1904 | 22,279 | 1,023,708 | 22,698 | 60,258 | 940,752 | 2,125,815 | 1,870,995 | 72,799 | 439,050 | 1,116,273 | 2,025,999 | 909,726 | 16.4 | 22.0 | | |
| | 1899 | 22,576 | | | 45,402 | 851,903 | 1,792,342 | 1,507,630 | 53,366 | 307,674 | 994,067 | 1,569,348 | 756,311 | | | | |
| Middle Atlantic..... | | | | | | | | | | | | | | | | | |
| | 1909 | 81,315 | 2,576,677 | 85,516 | 283,414 | 2,207,747 | 5,531,502 | 6,505,675 | 345,266 | 1,182,568 | 4,159,498 | 7,141,761 | 2,982,263 | 17.0 | 36.9 | | |
| | 1904 | 67,690 | 2,148,379 | 74,525 | 187,289 | 1,886,565 | 4,255,264 | 4,742,357 | 213,371 | 926,145 | 2,961,965 | 5,218,266 | 2,256,254 | 17.6 | 28.1 | | |
| | 1899 | 65,834 | | | 127,326 | 1,604,844 | 3,139,128 | 3,450,619 | 141,943 | 729,365 | 2,311,494 | 4,074,719 | 1,763,315 | | | | |
| East North Central..... | | | | | | | | | | | | | | | | | |
| | 1909 | 60,013 | 1,786,808 | 57,271 | 215,773 | 1,513,764 | 4,382,070 | 4,547,225 | 250,508 | 827,182 | 3,094,472 | 5,211,702 | 2,177,230 | 23.6 | 44.6 | | |
| | 1904 | 51,754 | 1,415,888 | 50,531 | 140,829 | 1,224,528 | 3,120,369 | 2,895,446 | 151,992 | 615,643 | 2,045,537 | 3,905,368 | 1,559,821 | 14.1 | 26.4 | | |
| | 1899 | 50,521 | | | 103,350 | 1,073,322 | 2,401,808 | 2,056,117 | 101,500 | 473,049 | 1,647,577 | 2,853,056 | 1,205,479 | | | | |
| West North Central..... | | | | | | | | | | | | | | | | | |
| | 1909 | 27,171 | 464,460 | 26,683 | 63,440 | 374,337 | 1,101,990 | 1,171,572 | 69,504 | 204,792 | 1,241,555 | 1,993,899 | 562,044 | 19.8 | 40.4 | | |
| | 1904 | 21,492 | 374,787 | 21,394 | 41,032 | 312,361 | 753,790 | 857,904 | 41,303 | 157,843 | 962,011 | 1,284,455 | 422,435 | 17.4 | 32.0 | | |
| | 1899 | 20,732 | | | 30,606 | 266,051 | 605,098 | 577,453 | 29,127 | 117,209 | 647,365 | 972,969 | 325,404 | | | | |
| South Atlantic..... | | | | | | | | | | | | | | | | | |
| | 1909 | 28,088 | 745,830 | 30,783 | 52,032 | 663,015 | 1,832,001 | 1,368,475 | 57,272 | 244,378 | 790,065 | 1,381,186 | 561,181 | 26.9 | 41.8 | | |
| | 1904 | 19,564 | 578,959 | 21,745 | 34,633 | 522,611 | 1,221,040 | 930,420 | 34,201 | 175,461 | 559,102 | 974,028 | 423,928 | 14.9 | 36.8 | | |
| | 1899 | 19,144 | | | 24,368 | 455,344 | 851,050 | 583,328 | 22,408 | 130,864 | 395,666 | 711,900 | 319,114 | | | | |
| East South Central..... | | | | | | | | | | | | | | | | | |
| | 1909 | 15,381 | 305,465 | 17,208 | 26,485 | 261,772 | 1,036,560 | 586,276 | 29,008 | 102,191 | 336,143 | 630,488 | 294,325 | 18.3 | 35.8 | | |
| | 1904 | 10,311 | 249,892 | 11,449 | 17,214 | 221,229 | 753,928 | 405,361 | 17,417 | 83,942 | 232,156 | 464,390 | 212,180 | 24.8 | 42.8 | | |
| | 1899 | 10,058 | | | 11,204 | 177,208 | 513,425 | 234,014 | 10,385 | 56,003 | 176,306 | 325,096 | 148,580 | | | | |
| West South Central..... | | | | | | | | | | | | | | | | | |
| | 1909 | 12,339 | 240,902 | 12,944 | 23,438 | 204,520 | 873,350 | 547,739 | 25,382 | 97,646 | 382,131 | 625,443 | 243,312 | 42.6 | 50.6 | | |
| | 1904 | 8,279 | 166,640 | 8,299 | 14,871 | 143,470 | 555,717 | 328,906 | 15,190 | 67,128 | 246,832 | 415,252 | 168,696 | 26.5 | 64.6 | | |
| | 1899 | 7,174 | | | 8,255 | 113,388 | 397,471 | 193,969 | 7,334 | 42,715 | 132,519 | 232,314 | 98,804 | | | | |
| Mountain..... | | | | | | | | | | | | | | | | | |
| | 1909 | 5,254 | 89,862 | 4,849 | 9,578 | 75,435 | 400,766 | 348,977 | 12,522 | 56,870 | 228,092 | 388,996 | 135,904 | 42.9 | 42.9 | | |
| | 1904 | 3,610 | 61,812 | 3,802 | 5,720 | 52,790 | 241,825 | 201,569 | 7,541 | 39,046 | 152,813 | 254,665 | 101,550 | 18.6 | 32.8 | | |
| | 1899 | 3,146 | | | 3,486 | 44,497 | 123,012 | 126,734 | 3,997 | 27,714 | 115,606 | 191,825 | 76,219 | | | | |
| Pacific..... | | | | | | | | | | | | | | | | | |
| | 1909 | 13,579 | 258,416 | 13,840 | 29,410 | 213,166 | 802,016 | 848,477 | 36,829 | 153,810 | 493,678 | 843,512 | 349,834 | 29.9 | 52.9 | | |
| | 1904 | 11,192 | 193,517 | 11,730 | 17,710 | 164,077 | 460,049 | 423,623 | 20,625 | 106,187 | 312,468 | 551,565 | 239,676 | 33.2 | 51.2 | | |
| | 1899 | 8,329 | | | 10,123 | 123,206 | 274,559 | 245,402 | 10,781 | 63,777 | 223,969 | 364,810 | 140,850 | | | | |
| NEW ENGLAND: | | | | | | | | | | | | | | | | | |
| Maine..... | | | | | | | | | | | | | | | | | |
| | 1909 | 3,546 | 88,476 | 3,661 | 4,880 | 79,955 | 459,599 | 202,260 | 5,797 | 37,632 | 97,191 | 176,629 | 78,928 | 6.7 | 22.2 | | |
| | 1904 | 3,145 | 82,109 | 3,379 | 3,772 | 74,958 | 343,627 | 143,708 | 3,989 | 32,682 | 80,042 | 144,620 | 63,978 | 7.2 | 27.5 | | |
| | 1899 | 2,878 | | | 3,103 | 69,914 | 259,232 | 114,008 | 2,661 | 25,731 | 61,219 | 112,959 | 51,749 | | | | |
| New Hampshire..... | | | | | | | | | | | | | | | | | |
| | 1909 | 1,961 | 84,191 | 2,014 | 3,519 | 78,658 | 293,991 | 139,990 | 4,191 | 26,200 | 98,157 | 164,561 | 66,424 | 20.3 | 33.1 | | |
| | 1904 | 1,618 | 69,758 | 1,726 | 2,666 | 65,366 | 218,344 | 109,495 | 2,972 | 27,683 | 73,216 | 123,611 | 50,365 | -3.4 | 14.9 | | |
| | 1899 | 1,771 | | | 2,068 | 67,646 | 200,975 | 92,146 | 2,200 | 26,850 | 60,163 | 107,591 | 47,428 | | | | |
| Vermont..... | | | | | | | | | | | | | | | | | |
| | 1909 | 1,958 | 38,580 | 2,113 | 2,679 | 33,788 | 159,445 | 73,470 | 2,803 | 17,272 | 34,823 | 68,310 | 33,487 | 2.1 | 8.3 | | |
| | 1904 | 1,699 | 37,015 | 1,856 | 2,053 | 33,106 | 140,616 | 62,069 | 2,103 | 15,221 | 32,430 | 63,084 | 30,654 | 17.5 | 22.5 | | |
| | 1899 | 1,938 | | | 1,695 | 28,179 | 126,124 | 43,800 | 1,610 | 11,426 | 26,385 | 51,515 | 25,130 | | | | |
| Massachusetts..... | | | | | | | | | | | | | | | | | |
| | 1909 | 11,684 | 644,399 | 11,194 | 48,646 | 584,559 | 1,175,071 | 1,279,087 | 63,279 | 301,174 | 830,765 | 1,490,329 | 659,764 | 19.7 | 32.6 | | |
| | 1904 | 10,723 | 532,481 | 11,258 | 32,824 | 488,399 | 938,007 | 965,949 | 29,654 | 232,389 | 636,411 | 1,124,092 | 497,681 | 11.4 | 23.8 | | |
| | 1899 | 10,929 | | | 25,256 | 438,284 | 796,061 | 781,868 | 29,480 | 195,278 | 498,655 | 907,627 | 408,972 | | | | |
| Rhode Island..... | | | | | | | | | | | | | | | | | |
| | 1909 | 1,951 | 122,641 | 1,721 | 7,382 | 113,538 | 226,740 | 290,901 | 10,577 | 55,294 | 158,192 | 250,344 | 122,152 | 16.7 | 38.7 | | |
| | 1904 | 1,617 | 104,299 | 1,561 | 5,420 | 97,318 | 181,017 | 215,901 | 7,041 | 43,113 | 112,872 | 202,110 | 89,238 | 10.3 | 22.1 | | |
| | 1899 | 1,678 | | | 4,022 | 88,197 | 153,619 | 176,901 | 5,300 | 35,995 | 87,962 | 165,550 | 77,568 | | | | |
| Connecticut..... | | | | | | | | | | | | | | | | | |
| | 1909 | 4,251 | 233,871 | 3,468 | 19,611 | 210,792 | 400,275 | 517,546 | 25,637 | 110,119 | 257,259 | 499,272 | 233,613 | 16.1 | 32.8 | | |
| | 1904 | 3,477 | 198,046 | 2,918 | 13,523 | 181,605 | 304,204 | 373,283 | 17,040 | 87,942 | 191,392 | 369,682 | 177,780 | 13.7 | 17.1 | | |
| | 1899 | 3,382 | | | 9,268 | 169,733 | 256,331 | 299,207 | 11,755 | 73,294 | 169,672 | 315,106 | 145,434 | | | | |
| MIDDLE ATLANTIC: | | | | | | | | | | | | | | | | | |
| New York..... | | | | | | | | | | | | | | | | | |
| | 1909 | 44,935 | 1,203,241 | 47,569 | 151,691 | 1,003,981 | 1,997,662 | 2,779,497 | 186,032 | 557,231 | 1,856,994 | 3,269,490 | 1,512,508 | 17.2 | 35.4 | | |
| | 1904 | 37,194 | 996,725 | 41,766 | 98,012 | 856,947 | 1,516,592 | 2,031,460 | 111,145 | 439,015 | 1,348,603 | 2,438,346 | 1,139,743 | 17.9 | 32.9 | | |
| | 1899 | 35,957 | | | 68,030 | 726,909 | 1,099,931 | 1,523,603 | 76,740 | 337,394 | 1,018,377 | 1,871,831 | 825,454 | | | | |
| New Jersey..... | | | | | | | | | | | | | | | | | |
| | 1909 | 8,817 | 371,265 | 8,204 | 36,838 | 326,223 | 612,293 | 977,172 | 48,337 | 169,710 | 720,694 | 1,145,529 | 425,495 | 22.5 | 47.9 | | |
| | 1904 | 7,010 | 296,262 | 6,730 | 23,196 | 266,336 | 436,274 | 715,090 | 28,957 | 128,108 | 479,449 | 774,369 | 303,829 | 24.5 | 40.0 | | |
| | 1899 | 6,415 | | | 15,361 | 213,975 | 322,503 | 477,301 | 19,058 | 95,165 | 334,728 | 583,006 | 218,280 | | | | |
| Pennsylvania..... | | | | | | | | | | | | | | | | | |
| | 1909 | 27,663 | 1,002,171 | 29,743 | 94,885 | 877,543 | 2,921,547 | 2,749,006 | 110,897 | 455,627 | 1,582,566 | 2,626,742 | 1,044,182 | 15.0 | 34.3 | | |
| | 1904 | 23,495 | 855,392 | 26,029 | 66,081 | 773,282 | 2,302,398 | 1,995,837 | 73,269 | 267,961 | 1,142,493 | 1,955,551 | 812,608 | 15.0 | 18.5 | | |
| | 1899 | 23,462 | | | 48,935 | 663,960 | 1,716,694 | 1,449,815 | 46,145 | 296,876 | 958,391 | 1,649,882 | 691,561 | | | | |
| EAST NORTH CENTRAL: | | | | | | | | | | | | | | | | | |
| Ohio..... | | | | | | | | | | | | | | | | | |
| | 1909 | 15,138 | 523,004 | 14,719 | 61,351 | 445,934 | 1,583,155 | 1,300,733 | 72,147 | 245,450 | 824,292 | 1,437,936 | 613,734 | 22.7 | 49.7 | | |
| | 1904 | 13,785 | 417,946 | 13,657 | 39,991 | 364,298 | 1,116,932 | 850,989 | 43,435 | 182,429 | 527,687 | 960,812 | 433,175 | 18.2 | 28.3 | | |
| | 1899 | 13,868 | | | 28,109 | 308,109 | 753,065 | 570,909 | 28,151 | 136,428 | 409,303 | 748,671 | 339,368 | | | | |
| Indiana..... | | | | | | | | | | | | | | | | | |
| | 1909 | 7,969 | 218,263 | 7,674 | 23,605 | 186,984 | 633,377 | 508,717 | 26,305 | 95,550 | 334,375 | 579,073 | 244,700 | 21.2 | 47.0 | | |
| | 1904 | 7,044 | 176,227 | 7,191 | 14,862 | 154,174 | 380,758 | 312,071 | 15,029 | 72,658 | 220,507 | 398,954 | 173,447 | 10.9 | 16.9 | | |
| | 1899 | 7,123 | | | 10,447 | 139,017 | 325,919 | 219,321 | 9,971 | 59,280 | 195,163 | 337,072 | 141,909 | | | | |
| Illinois..... | | | | | | | | | | | | | | | | | |
| | 1909 | 18,026 | 561,044 | 17,357 | 77,923 | 465,764 | 1,013,071 | 1,548,171 | 91,449 | 273,319 | 1,190,927 | 1,919,277 | 758,350 | 22.8 | 36.1 | | |
| | 1904 | 14,921 | 447,947 | 13,990 | 54,521 | 379,436 | 741,555 | 975,845 | 60,560 | 208,405 | 840,057 | 1,410,342 | 570,285 | 14.0 | 25.9 | | |
| | 1899 | 14,374 | | | 40,964 | 332,871 | 559,347 | 7 | | | | | | | | | |

ABSTRACT OF THE CENSUS—MANUFACTURES.

COMPARATIVE SUMMARY FOR THE UNITED STATES, BY STATES: 1909, 1904, AND 1899—Continued.

[See explanatory note on the first page of this table.]

| Table 111—Contd. | | Cen- sus. | Num- ber of estab- lish- ments. | PERSONS ENGAGED IN INDUSTRY. | | | | Primary horse- power. | Capital. | Sala- ries. | Wages. | Cost of materials. | Value of products. | Value added by manu- facture (value of products less cost of materials). | PER CENT OF INCREASE. | |
|-------------------------------|--------|--------------|---|---|-----------------------------|---|---|-----------------------------|----------|----------------|-----------|-----------------------|-----------------------|---|----------------------------|--|
| DIVISION AND STATE. | Total. | | | Pro- pri- etors and firm mem- bers. | Salaried em- ployees. | Wage earners (average number). | Wage earners (aver- age num- ber). | | | | | | | | Value of prod- ucts. | |
| | | | | | | | | | | | | | | | | |
| Expressed in thousands. | | | | | | | | | | | | | | | | |
| EAST NORTH CENTRAL—Continued. | | | | | | | | | | | | | | | | |
| Michigan..... | 1909 | 9,159 | 271,071 | 8,965 | 30,607 | 231,400 | 598,288 | \$583,947 | \$34,870 | \$118,068 | \$368,612 | \$685,109 | \$316,407 | 32.1 | 59.7 | |
| | 1904 | 7,446 | 200,190 | 7,732 | 17,235 | 175,229 | 440,890 | 337,894 | 17,470 | 81,279 | 230,081 | 429,120 | 199,039 | 12.5 | 34.2 | |
| | 1899 | 7,310 | ..... | ..... | 13,350 | 155,800 | 388,497 | 240,096 | 12,336 | 62,532 | 175,906 | 319,092 | 143,726 | ..... | ..... |  |
| Wisconsin..... | 1909 | 9,721 | 213,426 | 8,556 | 22,287 | 182,583 | 554,179 | 605,057 | 25,737 | 93,905 | 346,356 | 590,305 | 243,949 | 20.6 | 43.6 | |
| | 1904 | 8,558 | 173,572 | 7,961 | 14,220 | 151,391 | 440,234 | 412,647 | 15,498 | 71,472 | 227,255 | 411,140 | 183,885 | 10.1 | 25.8 | |
| | 1899 | 7,841 | ..... | ..... | 10,480 | 137,525 | 304,380 | 280,001 | 10,493 | 55,699 | 185,695 | 326,753 | 141,058 | ..... | ..... |  |
| WEST NORTH CENTRAL: | | | | | | | | | | | | | | | | |
| Minnesota..... | 1909 | 5,501 | 104,406 | 5,376 | 14,263 | 84,767 | 297,670 | 275,416 | 15,451 | 47,471 | 281,622 | 409,420 | 127,798 | 21.7 | 33.0 | |
| | 1904 | 4,766 | 83,301 | 4,524 | 9,141 | 69,635 | 220,934 | 184,903 | 9,033 | 35,843 | 210,554 | 307,858 | 97,304 | 7.9 | 37.6 | |
| | 1899 | 4,098 | ..... | ..... | 6,625 | 64,557 | 180,124 | 133,077 | 6,064 | 29,029 | 150,299 | 223,093 | 73,394 | ..... | ..... |  |
| Iowa..... | 1909 | 5,528 | 78,300 | 5,323 | 11,402 | 61,635 | 155,384 | 171,219 | 10,972 | 32,542 | 170,707 | 259,238 | 88,531 | 24.6 | 61.4 | |
| | 1904 | 4,785 | 61,361 | 4,758 | 7,122 | 40,481 | 118,065 | 111,428 | 5,948 | 22,997 | 102,844 | 160,572 | 57,728 | 11.4 | 20.8 | |
| | 1899 | 4,828 | ..... | ..... | 5,150 | 44,420 | 100,604 | 85,668 | 4,233 | 18,021 | 85,779 | 132,871 | 47,092 | ..... | ..... |  |
| Missouri..... | 1909 | 8,375 | 185,705 | 8,226 | 24,486 | 152,093 | 340,407 | 444,343 | 28,094 | 80,843 | 354,411 | 574,111 | 219,700 | 14.9 | 30.6 | |
| | 1904 | 6,404 | 156,585 | 6,209 | 17,119 | 133,167 | 247,861 | 379,369 | 10,002 | 66,044 | 262,258 | 439,540 | 187,291 | 23.6 | 39.0 | |
| | 1899 | 6,863 | ..... | ..... | 12,474 | 107,704 | 189,117 | 223,781 | 13,295 | 40,714 | 184,189 | 310,304 | 132,115 | ..... | ..... |  |
| North Dakota..... | 1909 | 752 | 4,148 | 723 | 636 | 2,780 | 13,196 | 11,585 | 629 | 1,787 | 13,674 | 19,137 | 5,463 | 58.9 | 87.3 | |
| | 1904 | 507 | 2,545 | 494 | 266 | 1,755 | 9,873 | 5,704 | 258 | 1,032 | 7,090 | 10,218 | 3,122 | 29.2 | 63.2 | |
| | 1899 | 337 | ..... | ..... | 152 | 1,358 | 7,351 | 3,512 | 130 | 671 | 4,151 | 6,260 | 2,109 | ..... | ..... |  |
| South Dakota..... | 1909 | 1,020 | 5,226 | 942 | 682 | 3,602 | 17,666 | 13,018 | 616 | 2,297 | 11,476 | 17,870 | 6,394 | 44.5 | 36.6 | |
| | 1904 | 686 | 3,582 | 649 | 441 | 2,492 | 11,154 | 7,585 | 294 | 1,422 | 8,697 | 13,086 | 4,389 | 12.0 | 37.3 | |
| | 1899 | 624 | ..... | ..... | 288 | 2,224 | 11,775 | 6,051 | 175 | 1,130 | 6,484 | 9,530 | 3,046 | ..... | ..... |  |
| Nebraska..... | 1909 | 2,500 | 31,006 | 2,522 | 5,108 | 24,336 | 64,400 | 99,901 | 5,491 | 13,948 | 151,081 | 199,019 | 47,938 | 20.1 | 28.5 | |
| | 1904 | 1,819 | 25,356 | 1,904 | 3,192 | 20,200 | 46,372 | 80,235 | 3,075 | 11,022 | 124,052 | 154,918 | 30,866 | 8.5 | 18.9 | |
| | 1899 | 1,065 | ..... | ..... | 2,290 | 18,669 | 41,825 | 65,906 | 2,107 | 8,842 | 95,925 | 130,302 | 34,377 | ..... | ..... |  |
| Kansas..... | 1909 | 3,435 | 54,649 | 3,571 | 6,863 | 44,215 | 213,141 | 156,090 | 7,351 | 25,904 | 258,884 | 325,104 | 66,220 | 24.3 | 64.0 | |
| | 1904 | 2,475 | 42,057 | 2,766 | 3,721 | 35,570 | 99,441 | 88,680 | 3,693 | 18,883 | 156,510 | 198,245 | 41,735 | 31.2 | 28.7 | |
| | 1899 | 2,299 | ..... | ..... | 3,612 | 27,119 | 68,242 | 59,458 | 3,123 | 12,802 | 120,738 | 154,009 | 33,271 | ..... | ..... |  |
| SOUTH ATLANTIC: | | | | | | | | | | | | | | | | |
| Delaware..... | 1909 | 726 | 23,084 | 722 | 2,024 | 21,238 | 52,779 | 60,906 | 2,322 | 10,296 | 30,938 | 52,840 | 21,902 | 15.0 | 28.4 | |
| | 1904 | 631 | 20,507 | 641 | 1,451 | 18,475 | 49,490 | 50,926 | 1,029 | 8,158 | 24,884 | 41,160 | 10,276 | -10.2 | -0.4 | |
| | 1899 | 633 | ..... | ..... | 1,180 | 20,502 | 40,134 | 38,791 | 1,337 | 8,457 | 24,725 | 41,321 | 10,590 | ..... | ..... |  |
| Maryland..... | 1909 | 4,837 | 125,480 | 5,376 | 12,192 | 107,921 | 218,244 | 251,227 | 13,617 | 45,436 | 199,040 | 315,060 | 116,020 | 14.6 | 29.7 | |
| | 1904 | 3,852 | 107,303 | 4,505 | 8,624 | 94,174 | 165,449 | 201,878 | 8,844 | 36,144 | 160,024 | 243,376 | 93,352 | (1) | 15.3 | |
| | 1899 | 3,886 | ..... | ..... | 6,741 | 94,170 | 132,052 | 149,155 | 6,845 | 32,414 | 129,355 | 211,076 | 81,721 | ..... | ..... |  |
| District of Columbia..... | 1909 | 518 | 9,758 | 475 | 1,576 | 7,707 | 16,563 | 30,553 | 1,846 | 4,989 | 10,247 | 25,289 | 15,042 | 22.4 | 37.7 | |
| | 1904 | 482 | 7,778 | 473 | 1,006 | 6,209 | 12,592 | 20,200 | 1,207 | 3,650 | 7,732 | 18,359 | 10,627 | 2.3 | 11.8 | |
| | 1899 | 491 | ..... | ..... | 957 | 6,155 | 10,255 | 17,061 | 872 | 3,023 | 7,475 | 10,426 | 8,551 | ..... | ..... |  |
| Virginia..... | 1909 | 5,685 | 120,797 | 6,570 | 8,551 | 105,676 | 283,028 | 216,392 | 9,101 | 38,154 | 125,583 | 219,794 | 94,211 | 31.6 | 47.7 | |
| | 1904 | 3,187 | 88,898 | 3,043 | 4,070 | 80,285 | 170,908 | 147,089 | 4,875 | 27,943 | 83,649 | 148,857 | 65,208 | 21.2 | 37.0 | |
| | 1899 | 3,186 | ..... | ..... | 3,828 | 66,223 | 136,090 | 92,900 | 3,030 | 20,274 | 59,360 | 108,944 | 49,284 | ..... | ..... |  |
| West Virginia..... | 1909 | 2,586 | 71,463 | 2,599 | 4,971 | 63,898 | 217,496 | 150,922 | 5,710 | 33,000 | 92,878 | 161,949 | 69,071 | 46.0 | 63.5 | |
| | 1904 | 2,109 | 49,880 | 2,230 | 2,892 | 43,758 | 138,578 | 86,821 | 2,899 | 21,153 | 54,419 | 90,041 | 44,022 | 32.3 | 47.8 | |
| | 1899 | 1,824 | ..... | ..... | 1,744 | 38,080 | 91,894 | 49,103 | 1,519 | 12,040 | 37,228 | 67,007 | 29,779 | ..... | ..... |  |
| North Carolina..... | 1909 | 4,931 | 133,453 | 5,451 | 6,529 | 121,473 | 378,550 | 217,185 | 9,903 | 34,355 | 121,861 | 216,056 | 94,795 | 42.3 | 52.0 | |
| | 1904 | 3,272 | 98,142 | 3,781 | 4,072 | 85,339 | 216,022 | 141,001 | 3,795 | 21,875 | 79,208 | 142,521 | 63,253 | 18.0 | 67.1 | |
| | 1899 | 3,465 | ..... | ..... | 2,894 | 72,322 | 164,407 | 68,283 | 2,395 | 14,052 | 44,854 | 85,274 | 40,420 | ..... | ..... |  |
| South Carolina..... | 1909 | 1,854 | 78,040 | 1,737 | 3,257 | 73,046 | 270,378 | 173,221 | 3,750 | 20,301 | 66,351 | 113,286 | 46,885 | 22.9 | 42.7 | |
| | 1904 | 1,309 | 63,071 | 1,241 | 2,389 | 59,441 | 197,479 | 113,422 | 2,355 | 13,869 | 49,969 | 70,376 | 29,407 | 26.4 | 48.8 | |
| | 1899 | 1,309 | ..... | ..... | 1,419 | 47,025 | 112,067 | 62,750 | 1,307 | 9,130 | 30,486 | 53,336 | 22,850 | ..... | ..... |  |
| Georgia..... | 1909 | 4,792 | 118,036 | 5,141 | 8,807 | 104,588 | 298,241 | 202,778 | 9,062 | 34,805 | 116,970 | 202,863 | 85,893 | 12.8 | 34.3 | |
| | 1904 | 3,219 | 102,365 | 3,512 | 6,104 | 92,749 | 220,419 | 135,211 | 5,927 | 27,393 | 83,625 | 151,040 | 67,415 | 11.3 | 59.8 | |
| | 1899 | 3,015 | ..... | ..... | 3,815 | 83,336 | 130,499 | 70,303 | 3,204 | 19,958 | 49,356 | 94,532 | 45,176 | ..... | ..... |  |
| Florida..... | 1909 | 2,159 | 64,810 | 2,712 | 4,025 | 57,473 | 89,816 | 65,291 | 4,955 | 22,982 | 26,128 | 72,800 | 46,762 | 36.5 | 44.9 | |
| | 1904 | 1,413 | 46,985 | 1,769 | 3,125 | 42,091 | 43,413 | 32,972 | 2,670 | 15,707 | 16,532 | 50,298 | 33,766 | 18.7 | 47.1 | |
| | 1899 | 1,275 | ..... | ..... | 1,781 | 35,471 | 36,350 | 25,682 | 1,299 | 10,916 | 12,847 | 34,184 | 21,837 | ..... | ..... |  |
| EAST SOUTH CENTRAL: | | | | | | | | | | | | | | | | |
| Kentucky..... | 1909 | 4,776 | 79,060 | 5,050 | 8,610 | 65,400 | 230,224 | 172,779 | 9,603 | 27,888 | 111,770 | 223,754 | 111,975 | 9.4 | 40.1 | |
| | 1904 | 3,734 | 69,755 | 4,108 | 5,853 | 59,794 | 174,625 | 147,282 | 5,871 | 24,439 | 86,545 | 159,754 | 73,209 | 15.6 | 26.3 | |
| | 1899 | 3,648 | ..... | ..... | 4,356 | 51,735 | 144,161 | 87,996 | 4,185 | 18,464 | 67,406 | 126,509 | 59,103 | ..... | ..... |  |
| Tennessee..... | 1909 | 4,609 | 87,672 | 5,415 | 8,417 | 73,840 | 242,277 | 107,924 | 9,186 | 28,251 | 104,016 | 180,217 | 76,201 | 21.9 | 30.6 | |
| | 1904 | 3,175 | 69,287 | 3,805 | 4,910 | 60,572 | 175,780 | 102,440 | 5,081 | 22,806 | 79,352 | 137,961 | 58,609 | 31.8 | 48.7 | |
| | 1899 | 3,116 | ..... | ..... | 3,329 | 45,963 | 130,318 | 93,140 | 3,048 | 14,727 | 54,559 | 92,740 | 38,190 | ..... | ..... |  |
| Alabama..... | 1909 | 3,398 | 81,972 | 3,769 | 6,055 | 72,148 | 357,837 | 173,180 | 6,565 | 27,284 | 83,442 | 145,062 | 62,520 | 16.0 | 33.7 | |
| | 1904 | 1,882 | 67,884 | 1,948 | 3,763 | 62,173 | 293,185 | 105,383 | 3,867 | 21,878 | 60,458 | 109,170 | 48,712 | 18.0 | 51.4 | |
| | 1899 | 2,000 | ..... | ..... | 2,250 | 52,711 | 173,208 | 60,106 | 2,059 | 14,912 | 37,998 | 72,110 | 34,112 | ..... | ..... |  |
| Mississippi..... | 1909 | 2,598 | 56,761 | 2,974 | 3,403 | 50,384 | 200,222 | 72,393 | 3,654 | 18,768 | 36,926 | 60,555 | 48,629 | 30.2 | 40.2 | |
| | 1904 | 1,520 | 42,966 | 1,588 | 2,688 | 38,690 | 110,338 | 50,256 | 2,598 | 14,819 | 25,801 | 57,451 | 31,650 | 44.4 | 70.4 | |
| | 1899 | 1,294 | | | 1,260 | 26,790 | | | | | | | | | | |

STATES, CITIES, AND INDUSTRIES.

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COMPARATIVE SUMMARY FOR THE UNITED STATES, BY STATES: 1909, 1904, AND 1899—Continued.

[See explanatory note on the first page of this table.]

| Table 111—Contd. | | Cen- sus. | Num- ber of estab- lish- ments. | PERSONS ENGAGED IN INDUSTRY. | | | | Primary horse- power. | Capital. | Sala- ries. | Wages. | Cost of materials. | Value of products. | Value added by manu- facture (value of products less cost of materials). | PER CENT OF INCREASE. | |
|-------------------------|--------|--------------|---|---|-----------------------------|---|--|-----------------------------|----------|----------------|----------|-----------------------|-----------------------|--|----------------------------|--|
| DIVISION AND STATE. | Total. | | | Pro- pri- etors and firm mem- bers. | Salaried em- ployees. | Wage earners (average number). | Wage earners (aver- age num- ber). | | | | | | | | Value of prod- ucts. | |
| | | | | | | | | | | | | | | | | |
| Expressed in thousands. | | | | | | | | | | | | | | | | |
| WEST SOUTH CENTRAL: | | | | | | | | | | | | | | | | |
| Arkansas..... | 1909 | 2,925 | 51,730 | 3,455 | 3,293 | 44,982 | 173,058 | \$70,174 | \$3,461 | \$19,113 | \$34,935 | \$74,916 | \$39,981 | 35.9 | 39.1 | |
| | 1904 | 1,907 | 37,557 | 2,140 | 2,328 | 33,089 | 109,509 | 46,306 | 2,310 | 14,544 | 21,799 | 53,865 | 32,066 | 5.0 | 35.0 | |
| | 1899 | 1,746 | | | 1,549 | 31,525 | 79,500 | 25,385 | 1,202 | 10,184 | 18,288 | 39,898 | 21,600 | | | |
| Louisiana..... | 1909 | 2,516 | 86,563 | 2,295 | 8,103 | 76,165 | 346,652 | 221,816 | 9,008 | 33,386 | 134,865 | 223,949 | 89,084 | 36.4 | 20.2 | |
| | 1904 | 2,091 | 63,735 | 1,899 | 5,977 | 55,839 | 251,903 | 150,811 | 6,044 | 25,316 | 117,035 | 186,380 | 69,345 | 36.6 | 67.3 | |
| | 1899 | 1,826 | | | 3,576 | 40,878 | 190,182 | 100,875 | 2,934 | 14,725 | 75,404 | 111,398 | 35,994 | | | |
| Oklahoma..... | 1909 | 2,310 | 18,034 | 2,608 | 2,193 | 13,143 | 71,139 | 35,873 | 2,645 | 7,240 | 34,153 | 53,682 | 19,529 | 140.9 | 119.5 | |
| | 1904 | 1,123 | 7,456 | 1,187 | 813 | 5,456 | 29,605 | 16,124 | 718 | 2,799 | 16,394 | 24,459 | 8,065 | 129.1 | 290.7 | |
| | 1899 | 495 | | | 269 | 2,381 | 11,572 | 4,054 | 219 | 894 | 5,490 | 8,134 | 2,794 | | | |
| Texas..... | 1909 | 4,588 | 84,575 | 4,496 | 9,849 | 70,230 | 282,471 | 216,876 | 10,868 | 37,907 | 178,178 | 272,690 | 94,718 | 43.1 | 81.3 | |
| | 1904 | 3,158 | 57,892 | 3,073 | 5,753 | 49,066 | 164,637 | 115,665 | 6,118 | 24,469 | 91,604 | 150,528 | 58,924 | 27.1 | 62.0 | |
| | 1899 | 3,107 | | | 2,861 | 28,504 | 116,157 | 63,655 | 2,919 | 16,912 | 54,388 | 92,894 | 38,506 | | | |
| MOUNTAIN: | | | | | | | | | | | | | | | | |
| Montana..... | 1909 | 677 | 13,694 | 659 | 1,380 | 11,655 | 90,402 | 44,588 | 2,654 | 10,901 | 49,180 | 73,272 | 24,092 | 30.1 | 10.3 | |
| | 1904 | 382 | 10,196 | 334 | 905 | 8,957 | 46,736 | 52,590 | 1,506 | 8,652 | 40,990 | 66,415 | 25,485 | -9.1 | 25.9 | |
| | 1899 | 395 | | | 508 | 9,854 | 43,679 | 38,225 | 786 | 7,377 | 30,068 | 52,745 | 22,677 | | | |
| Idaho..... | 1909 | 725 | 9,909 | 831 | 858 | 8,220 | 42,804 | 32,477 | 984 | 5,498 | 9,920 | 22,409 | 12,480 | 108.5 | 155.4 | |
| | 1904 | 364 | 3,791 | 371 | 359 | 3,061 | 16,987 | 9,689 | 379 | 2,659 | 4,009 | 8,769 | 4,700 | 97.2 | 192.2 | |
| | 1899 | 287 | | | 92 | 1,552 | 5,649 | 2,130 | 66 | 818 | 1,423 | 3,001 | 1,562 | | | |
| Wyoming..... | 1909 | 268 | 3,393 | 263 | 263 | 2,867 | 7,628 | 6,195 | 311 | 2,081 | 2,608 | 6,269 | 3,641 | 50.3 | 77.4 | |
| | 1904 | 169 | 2,163 | 150 | 179 | 1,834 | 3,604 | 2,696 | 266 | 1,261 | 1,301 | 3,523 | 2,222 | -11.0 | 7.9 | |
| | 1899 | 139 | | | 87 | 2,060 | 3,820 | 2,048 | 91 | 1,209 | 1,370 | 3,268 | 1,898 | | | |
| Colorado..... | 1909 | 2,034 | 34,115 | 1,722 | 4,326 | 28,067 | 154,615 | 162,668 | 5,648 | 19,912 | 80,491 | 130,044 | 49,553 | 28.7 | 26.9 | |
| | 1904 | 1,606 | 25,888 | 1,398 | 2,677 | 21,813 | 124,907 | 107,664 | 3,549 | 15,100 | 63,114 | 100,144 | 37,630 | 11.9 | 12.4 | |
| | 1899 | 1,323 | | | 1,870 | 19,498 | 43,434 | 58,173 | 2,059 | 11,706 | 60,751 | 89,068 | 28,317 | | | |
| New Mexico..... | 1909 | 313 | 4,766 | 288 | 335 | 4,143 | 15,465 | 7,743 | 383 | 2,591 | 3,261 | 7,808 | 4,637 | 19.1 | 38.4 | |
| | 1904 | 199 | 3,891 | 189 | 224 | 3,478 | 5,948 | 4,638 | 264 | 2,153 | 2,236 | 5,796 | 2,470 | 39.7 | 40.5 | |
| | 1899 | 174 | | 88 | 2,490 | 3,658 | 3,658 | 2,161 | 91 | 1,199 | 1,999 | 4,061 | 2,062 | | | |
| Arizona..... | 1909 | 311 | 7,202 | 261 | 500 | 6,441 | 39,140 | 32,873 | 798 | 5,505 | 33,600 | 50,257 | 16,657 | 34.4 | 79.9 | |
| | 1904 | 169 | 5,217 | 133 | 291 | 4,793 | 21,412 | 14,396 | 472 | 3,969 | 14,505 | 28,083 | 13,088 | 53.3 | 37.4 | |
| | 1899 | 154 | | 205 | 3,126 | 8,537 | 8,537 | 9,517 | 269 | 2,287 | 7,877 | 20,439 | 12,562 | | | |
| Utah..... | 1909 | 749 | 14,133 | 688 | 1,660 | 11,785 | 42,947 | 52,627 | 1,966 | 8,400 | 41,266 | 61,980 | 20,723 | 46.4 | 58.7 | |
| | 1904 | 606 | 9,650 | 619 | 979 | 8,052 | 19,397 | 26,004 | 1,039 | 5,158 | 24,940 | 38,927 | 13,987 | 48.8 | 116.5 | |
| | 1899 | 575 | | 599 | 5,413 | 12,674 | 12,674 | 13,219 | 501 | 2,763 | 11,440 | 17,982 | 6,542 | | | |
| Nevada..... | 1909 | 177 | 2,650 | 137 | 256 | 2,257 | 7,765 | 9,806 | 378 | 1,982 | 8,366 | 11,887 | 3,521 | 181.4 | 282.9 | |
| | 1904 | 115 | 1,016 | 108 | 106 | 802 | 2,834 | 2,892 | 126 | 694 | 1,628 | 3,096 | 1,408 | 59.1 | 145.5 | |
| | 1899 | 99 | | | 37 | 504 | 1,561 | 1,251 | 34 | 353 | 602 | 1,261 | 599 | | | |
| PACIFIC: | | | | | | | | | | | | | | | | |
| Washington..... | 1909 | 3,674 | 80,118 | 3,264 | 7,734 | 69,120 | 297,897 | 222,261 | 9,827 | 49,766 | 117,888 | 220,746 | 102,858 | 52.9 | 71.4 | |
| | 1904 | 2,751 | 51,459 | 2,602 | 3,658 | 45,199 | 168,342 | 96,953 | 4,093 | 30,087 | 66,166 | 128,822 | 62,656 | 43.4 | 81.9 | |
| | 1899 | 1,926 | | | 2,103 | 31,523 | 87,601 | 41,575 | 2,064 | 17,065 | 38,277 | 70,831 | 32,584 | | | |
| Oregon..... | 1909 | 2,246 | 34,722 | 2,499 | 3,473 | 28,750 | 175,019 | 89,082 | 4,047 | 19,902 | 50,552 | 93,005 | 42,453 | 55.2 | 67.5 | |
| | 1904 | 1,602 | 22,018 | 1,726 | 1,769 | 18,523 | 81,348 | 44,023 | 2,133 | 11,443 | 30,397 | 55,525 | 24,928 | 28.1 | 51.7 | |
| | 1899 | 1,406 | | | 1,143 | 14,459 | 60,005 | 28,359 | 1,222 | 6,822 | 20,789 | 36,593 | 15,604 | | | |
| California..... | 1909 | 7,659 | 141,576 | 8,077 | 18,203 | 115,296 | 329,100 | 537,194 | 22,855 | 84,142 | 325,238 | 529,761 | 204,523 | 14.9 | 44.3 | |
| | 1904 | 6,839 | 120,040 | 7,402 | 12,283 | 100,355 | 210,359 | 282,647 | 14,399 | 64,657 | 215,726 | 387,218 | 181,492 | 30.0 | 42.7 | |
| | 1899 | 4,997 | | | 6,877 | 77,224 | 126,933 | 175,468 | 7,495 | 39,890 | 164,694 | 287,386 | 92,492 | | | |

1 Includes Indian Territory.

ABSTRACT OF THE CENSUS—MANUFACTURES.

COMPARATIVE SUMMARY FOR THE 25 PRINCIPAL CITIES: 1909, 1904, AND 1899.

NOTE.—The figures for some cities do not agree with those published in 1904 because it was necessary to revise the totals in order to include data only for those establishments located within the corporate limits of the cities.

[A minus sign (—) denotes decrease.]

| Table 112. | | | | | | | | | | | | | | | | |
|-------------------------|--------------|---|------------------------------|---|-----------------------------|---|---|-----------------------------|-----------|----------------|-------------|-----------------------|-----------------------|--|-------------------------------|--|
| CITY. | Cen- sus. | Number of estab- lish- ments. | PERSONS ENGAGED IN INDUSTRY. | | | | | Primary horse- power. | Capital. | Sala- ries. | Wages. | Cost of materials. | Value of products. | Value added by manu- facture (value of products less cost of ma- terials). | PER CENT OF INCREASE. | |
| | | | Total. | Pro- pri- etors and firm mem- bers. | Salaried em- ployees. | Wage earners (average number). | Wage earners (aver- age num- ber). | | | | | | | | Value of prod- ucts. | |
| | | | | | | | | | | | | | | | | |
| Expressed in thousands. | | | | | | | | | | | | | | | | |
| New York, N. Y. | 1909 | 25,938 | 680,510 | 20,055 | 97,453 | 554,002 | 420,003 | \$1,364,353 | \$122,074 | \$323,098 | \$1,092,155 | \$2,020,093 | \$937,538 | 19.2 | 33.0 | |
| | 1904 | 20,830 | 552,952 | 24,050 | 63,586 | 464,716 | | 1,042,046 | 73,028 | 248,128 | 818,020 | 1,620,523 | 708,494 | 19.6 | 30.2 | |
| | 1899 | 19,243 | | | 43,783 | 388,586 | | 853,238 | 51,656 | 106,050 | 634,210 | 1,172,870 | 538,660 | | | |
| Chicago, Ill. | 1909 | 9,656 | 356,954 | 8,156 | 54,821 | 203,977 | 525,236 | 971,841 | 65,925 | 174,112 | 793,470 | 1,281,171 | 487,701 | 21.5 | 34.1 | |
| | 1904 | 8,159 | 289,529 | 7,269 | 40,270 | 241,084 | | 637,743 | 45,001 | 136,405 | 589,914 | 955,036 | 365,122 | 9.4 | 19.7 | |
| | 1899 | 7,668 | | | 32,406 | 221,101 | | 511,240 | 32,008 | 108,727 | 502,222 | 797,870 | 295,057 | | | |
| Philadelphia, Pa. | 1909 | 8,379 | 294,498 | 9,162 | 33,452 | 251,884 | 365,950 | 691,397 | 39,446 | 126,381 | 429,092 | 746,076 | 316,984 | 10.0 | 26.2 | |
| | 1904 | 7,087 | 250,878 | 8,140 | 22,839 | 228,869 | | 520,179 | 25,306 | 107,640 | 333,352 | 591,388 | 258,036 | 6.6 | 13.7 | |
| | 1899 | 7,503 | | | 17,498 | 214,775 | | 445,725 | 18,931 | 94,737 | 205,175 | 519,082 | 224,807 | | | |
| St. Louis, Mo. | 1909 | 2,667 | 104,587 | 1,809 | 15,347 | 87,371 | 163,615 | 269,392 | 19,071 | 48,535 | 188,189 | 328,495 | 140,306 | 5.6 | 22.9 | |
| | 1904 | 2,482 | 95,962 | 1,583 | 11,381 | 82,608 | | 265,937 | 13,475 | 42,642 | 137,740 | 207,307 | 129,667 | 27.6 | 38.0 | |
| | 1899 | 2,046 | | | 8,807 | 64,832 | | 150,526 | 10,079 | 29,145 | 101,838 | 193,733 | 91,895 | | | |
| Cleveland, Ohio. | 1909 | 2,148 | 98,080 | 1,718 | 12,240 | 84,728 | 199,808 | 227,397 | 15,506 | 48,053 | 154,915 | 271,961 | 117,046 | 32.3 | 58.2 | |
| | 1904 | 1,616 | 72,362 | 1,445 | 6,870 | 64,041 | | 156,321 | 8,299 | 33,450 | 97,578 | 171,024 | 74,346 | 15.7 | 23.4 | |
| | 1899 | 1,350 | | | 5,064 | 55,341 | | 101,243 | 5,453 | 26,518 | 76,405 | 139,350 | 62,891 | | | |
| Detroit, Mich. | 1909 | 2,036 | 95,841 | 1,804 | 13,026 | 81,011 | 114,190 | 190,125 | 15,260 | 43,007 | 130,218 | 252,002 | 122,774 | 67.1 | 97.3 | |
| | 1904 | 1,302 | 55,718 | 1,312 | 5,023 | 48,483 | | 91,038 | 6,126 | 22,558 | 66,581 | 128,247 | 61,666 | 26.3 | 45.1 | |
| | 1899 | 1,259 | | | 4,947 | 38,373 | | 67,224 | 4,726 | 15,317 | 47,007 | 88,366 | 41,359 | | | |
| Pittsburgh, Pa. | 1909 | 1,659 | 70,625 | 1,553 | 10,598 | 67,474 | 307,066 | 283,130 | 12,683 | 39,973 | 148,527 | 243,454 | 94,927 | -5.8 | 15.2 | |
| | 1904 | 1,502 | 81,407 | 1,616 | 8,273 | 71,618 | | 200,705 | 9,753 | 39,805 | 124,581 | 211,250 | 86,078 | -0.2 | -3.2 | |
| | 1899 | 1,301 | | | 5,850 | 71,774 | | 211,774 | 6,351 | 37,035 | 128,458 | 218,193 | 89,740 | | | |
| Boston, Mass. | 1909 | 3,155 | 85,158 | 2,873 | 12,648 | 69,637 | 68,419 | 175,182 | 15,641 | 39,910 | 124,577 | 237,457 | 112,880 | 17.7 | 28.8 | |
| | 1904 | 2,747 | 71,421 | 2,833 | 9,428 | 59,100 | | 131,503 | 10,464 | 31,873 | 94,603 | 184,351 | 89,748 | 11.9 | 13.3 | |
| | 1899 | 2,878 | | | 7,691 | 52,853 | | 130,143 | 8,180 | 28,209 | 82,205 | 102,705 | 80,470 | | | |
| Buffalo, N. Y. | 1909 | 1,753 | 61,246 | 1,489 | 8,345 | 51,412 | 121,791 | 193,041 | 9,347 | 28,727 | 136,538 | 218,804 | 82,266 | 18.0 | 48.5 | |
| | 1904 | 1,538 | 50,390 | 1,559 | 5,264 | 43,607 | | 137,023 | 5,642 | 21,622 | 88,367 | 147,378 | 59,011 | 27.1 | 39.5 | |
| | 1899 | 1,478 | | | 3,787 | 34,275 | | 95,740 | 3,429 | 15,678 | 65,939 | 105,627 | 39,688 | | | |
| Milwaukee, Wis. | 1909 | 1,704 | 68,933 | 1,472 | 7,959 | 59,502 | 94,254 | 219,391 | 9,405 | 31,437 | 120,021 | 208,324 | 87,703 | 37.2 | 51.0 | |
| | 1904 | 1,527 | 49,843 | 1,393 | 5,084 | 43,366 | | 161,494 | 5,837 | 20,809 | 71,103 | 137,995 | 66,892 | 5.2 | 24.5 | |
| | 1899 | 1,419 | | | 4,077 | 41,220 | | 105,504 | 4,305 | 17,102 | 59,094 | 110,854 | 51,160 | | | |
| Newark, N. J. | 1909 | 1,858 | 60,086 | 1,704 | 8,327 | 59,955 | 78,263 | 154,233 | 11,777 | 33,070 | 114,679 | 202,511 | 87,832 | 18.3 | 35.0 | |
| | 1904 | 1,600 | 57,403 | 1,631 | 5,135 | 50,697 | | 119,026 | 6,085 | 25,622 | 80,680 | 150,055 | 69,366 | 18.2 | 33.1 | |
| | 1899 | 1,573 | | | 4,140 | 42,878 | | 97,182 | 5,256 | 20,305 | 60,772 | 112,728 | 51,956 | | | |
| Cincinnati, Ohio. | 1909 | 2,184 | 72,488 | 2,015 | 10,281 | 60,192 | 88,597 | 150,254 | 12,750 | 31,101 | 101,932 | 194,516 | 62,584 | 2.7 | 17.1 | |
| | 1904 | 2,171 | 68,054 | 2,180 | 8,190 | 58,584 | | 130,272 | 9,077 | 27,300 | 83,253 | 160,059 | 82,801 | 6.6 | 17.2 | |
| | 1899 | 2,454 | | | 6,104 | 54,942 | | 103,404 | 6,437 | 23,104 | 71,301 | 141,078 | 70,287 | | | |
| Baltimore, Md. | 1909 | 2,502 | 83,473 | 2,660 | 9,360 | 71,444 | 76,764 | 164,437 | 10,571 | 31,171 | 107,024 | 186,078 | 79,954 | 9.8 | 24.5 | |
| | 1904 | 2,158 | 74,234 | 2,432 | 6,762 | 65,050 | | 146,961 | 6,907 | 25,507 | 80,555 | 150,171 | 60,016 | -2.3 | 11.1 | |
| | 1899 | 2,274 | | | 5,501 | 60,571 | | 107,217 | 5,871 | 23,493 | 75,223 | 135,108 | 50,885 | | | |
| Minneapolis, Minn. | 1909 | 1,102 | 33,923 | 1,012 | 5,940 | 26,062 | 89,247 | 90,382 | 6,277 | 15,638 | 110,093 | 165,405 | 45,412 | 24.4 | 36.5 | |
| | 1904 | 870 | 26,045 | 847 | 3,527 | 21,671 | | 66,135 | 3,536 | 11,418 | 88,882 | 121,163 | 32,281 | 10.5 | 28.3 | |
| | 1899 | 780 | | | 2,158 | 19,620 | | 50,177 | 2,113 | 9,383 | 68,910 | 94,408 | 25,498 | | | |
| Kansas City, Kans. | 1909 | 165 | 14,333 | 142 | 1,897 | 12,294 | 31,885 | 42,817 | 2,138 | 7,027 | 144,390 | 164,081 | 19,091 | 16.8 | 70.1 | |
| | 1904 | 100 | 11,761 | 82 | 1,150 | 10,529 | | 27,773 | 1,216 | 5,449 | 83,883 | 90,473 | 12,500 | 11.0 | 20.6 | |
| | 1899 | 114 | | | 2,063 | 9,483 | | 18,236 | 1,011 | 4,250 | 68,875 | 80,023 | 11,148 | | | |
| San Francisco, Cal. | 1909 | 1,796 | 36,910 | 2,544 | 6,122 | 28,244 | 40,934 | 133,824 | 8,086 | 22,381 | 76,217 | 133,041 | 50,824 | -26.5 | -3.4 | |
| | 1904 | 2,251 | 46,006 | 3,047 | 5,100 | 38,420 | | 102,302 | 6,630 | 25,015 | 75,046 | 137,788 | 61,842 | 18.0 | 28.7 | |
| | 1899 | 1,748 | | | 3,413 | 32,555 | | 60,643 | 3,929 | 17,259 | 65,535 | 107,024 | 41,489 | | | |
| Jersey City, N. J. | 1909 | 745 | 30,239 | 614 | 4,171 | 25,454 | 35,917 | 79,794 | 5,049 | 13,210 | 89,317 | 128,775 | 39,458 | 25.1 | 70.0 | |
| | 1904 | 628 | 23,312 | 580 | 2,379 | 20,353 | | 82,395 | 2,990 | 10,021 | 48,790 | 75,741 | 26,942 | 17.0 | 3.9 | |
| | 1899 | 536 | | | 1,614 | 17,391 | | 78,612 | 2,039 | 7,965 | 50,206 | 72,980 | 22,064 | | | |
| Indianapolis, Ind. | 1909 | 855 | 37,029 | 631 | 5,483 | 31,815 | 50,872 | 70,497 | 6,494 | 10,557 | 84,151 | 126,522 | 42,371 | 19.0 | 53.9 | |
| | 1904 | 810 | 31,431 | 591 | 4,115 | 26,725 | | 53,420 | 4,096 | 12,020 | 51,703 | 82,228 | 30,465 | 27.4 | 38.6 | |
| | 1899 | 697 | | | 2,325 | 20,985 | | 34,730 | 2,248 | 8,844 | 38,287 | 59,322 | 21,035 | | | |
| Providence, R. I. | 1909 | 1,089 | 51,607 | 1,017 | 4,269 | 46,381 | 50,410 | 118,512 | 5,650 | 24,440 | 64,770 | 120,241 | 55,471 | 16.5 | 30.7 | |
| | 1904 | 881 | 43,748 | 893 | 3,051 | 39,804 | | 95,666 | 3,819 | 10,555 | 49,973 | 91,981 | 42,008 | 3.7 | 16.9 | |
| | 1899 | 929 | | | 2,493 | 38,368 | | 79,686 | 3,053 | 10,931 | 42,651 | 78,657 | 36,106 | | | |
| Rochester, N. Y. | 1909 | 1,203 | 40,617 | 1,042 | 6,467 | 39,108 | 30,277 | 95,708 | 7,734 | 21,518 | 50,674 | 112,676 | 62,002 | 23.1 | 38.9 | |
| | 1904 | 1,109 | 37,128 | 1,084 | 4,265 | 31,779 | | 69,807 | 4,529 | 14,702 | 37,918 | 81,109 | 43,191 | 13.3 | 35.9 | |
| | 1899 | 1,221 | | | 3,061 | 28,049 | | 45,210 | 3,131 | 11,366 | 28,245 | 59,609 | 31,424 | | | |
| Louisville, Ky. | 1909 | 903 | 32,397 | 669 | 4,705 | 27,023 | 49,926 | 79,437 | 5,533 | 12,460 | 54,128 | 101,284 | 47,150 | 8.2 | 21.7 | |
| | 1904 | 842 | 28,817 | 706 | 3,120 | 24,985 | | 79,999 | 3,307 | 10,812 | 45,682 | 83,204 | 37,522 | 8.3 | 25.9 | |
| | 1899 | 800 | | | 2,491 | 23,062 | | 44,016 | 2,505 | 8,436 | 34,876 | 66,110 | 31,234 | | | |
| South Omaha, Nebr. | 1909 | 71 | 7,650 | 63 | 1,200 | 6,306 | 11,859 | 10,877 | 1,559 | 3,544 | 77,673 | 92,436 | 14,763 | 11.4 | 37.1 | |
| | 1904 | 41 | 6,571 | 34 | 875 | 5,662 | | 20,564 | 950 | 3,210 | 59 | | | | | |

CITIES OF 10,000 INHABITANTS OR OVER—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE EARNERS, VALUE OF PRODUCTS, AND VALUE ADDED BY MANUFACTURE: 1909, 1904, AND 1899.

NOTE.—The figures for some cities do not agree with those published in 1904, because it was necessary to revise the totals in order to include data only for those establishments located within the corporate limits of the cities. Figures for 1904 and 1899 are available for cities which had between 8,000 and 10,000 inhabitants in 1900 and are included, but for cities having less than 8,000 inhabitants in 1900 comparative data are not available.

| CITY. | NUMBER OF ESTABLISHMENTS. | | | AVERAGE NUMBER OF WAGE EARNERS. | | | VALUE OF PRODUCTS. | | | VALUE ADDED BY MANUFACTURE (VALUE OF PRODUCTS LESS COST OF MATERIALS). | | |
|------------------------------|---------------------------|-------|-------|---------------------------------|--------|--------|-------------------------|---------|---------|--|---------|--------|
| | | | | | | | Expressed in thousands. | | | | | |
| | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 |
| ALABAMA: | | | | | | | | | | | | |
| Anniston..... | 39 | 35 | 25 | 2,167 | 2,005 | 1,445 | \$4,333 | \$3,327 | \$1,563 | \$1,569 | \$1,449 | \$894 |
| Bessemer..... | 31 | | | 1,816 | | | 6,106 | | | 1,867 | | |
| Birmingham..... | 248 | 122 | 109 | 8,999 | 3,987 | 3,480 | 24,128 | 7,593 | 5,596 | 10,118 | 3,644 | 4,639 |
| Gadsden..... | 27 | | | 1,525 | | | 1,525 | | | 621 | | |
| Mobile..... | 126 | 139 | 113 | 2,362 | 2,496 | 2,371 | 5,429 | 4,942 | 3,486 | 2,490 | 2,630 | 1,944 |
| Montgomery..... | 73 | 59 | 52 | 2,284 | 1,940 | 1,528 | 5,443 | 3,878 | 2,944 | 2,420 | 1,690 | 1,220 |
| Selma..... | 35 | 26 | 32 | 813 | 668 | 609 | 2,382 | 1,139 | 1,419 | 787 | 512 | 557 |
| ARIZONA: | | | | | | | | | | | | |
| Phoenix..... | 57 | | | 304 | | | 1,467 | | | 608 | | |
| Tucson..... | 35 | | | 555 | | | 2,087 | | | 767 | | |
| ARKANSAS: | | | | | | | | | | | | |
| Argenta..... | 18 | | | 2,157 | | | 4,842 | | | 2,157 | | |
| Fort Smith..... | 83 | 63 | 66 | 1,455 | 1,049 | 677 | 3,739 | 2,329 | 1,491 | 1,733 | 1,215 | 760 |
| Hot Springs..... | 71 | 22 | 21 | 335 | 239 | 94 | 844 | 597 | 191 | 541 | 309 | 106 |
| Little Rock..... | 125 | 104 | 62 | 2,017 | 1,971 | 1,397 | 6,882 | 4,690 | 3,379 | 2,968 | 2,131 | 1,600 |
| Pine Bluff..... | 42 | 34 | 37 | 1,118 | 1,425 | 990 | 2,387 | 2,500 | 1,541 | 1,033 | 1,079 | 732 |
| CALIFORNIA: | | | | | | | | | | | | |
| Alameda..... | 51 | 30 | 23 | 915 | 279 | 373 | 2,554 | 697 | 1,335 | 1,025 | 494 | 547 |
| Bakersfield..... | 27 | | | 746 | | | 2,819 | | | 1,119 | | |
| Berkeley..... | 48 | 44 | 22 | 1,084 | 338 | 211 | 4,435 | 1,474 | 651 | 1,748 | 602 | 359 |
| Eureka..... | 48 | | | 946 | | | 3,012 | | | 1,518 | | |
| Fresno..... | 76 | 80 | 62 | 1,938 | 1,915 | 819 | 11,090 | 9,754 | 2,752 | 3,068 | 2,926 | 1,048 |
| Long Beach..... | 51 | | | 277 | | | 927 | | | 429 | | |
| Los Angeles..... | 1,325 | 814 | 534 | 17,327 | 10,424 | 5,173 | 68,586 | 24,814 | 15,134 | 29,673 | 16,125 | 7,046 |
| Oakland..... | 441 | 248 | 195 | 6,905 | 3,353 | 2,476 | 22,343 | 9,015 | 5,398 | 10,496 | 4,708 | 2,664 |
| Pasadena..... | 88 | 46 | 28 | 499 | 318 | 177 | 1,724 | 967 | 331 | 870 | 546 | 294 |
| Pomona..... | 30 | | | 224 | | | 560 | | | 230 | | |
| Redlands..... | 37 | | | 147 | | | 518 | | | 279 | | |
| Riverside..... | 53 | | | 267 | | | 1,178 | | | 511 | | |
| Sacramento..... | 211 | 156 | 111 | 4,514 | 4,203 | 3,686 | 13,977 | 10,073 | 9,495 | 7,083 | 4,929 | 4,130 |
| San Bernardino..... | 41 | | | 729 | | | 1,660 | | | 897 | | |
| San Diego..... | 117 | 89 | 57 | 1,071 | 541 | 255 | 4,741 | 1,974 | 670 | 2,074 | 938 | 399 |
| San Francisco..... | 1,796 | 2,251 | 1,748 | 28,244 | 38,429 | 32,555 | 133,041 | 137,783 | 107,694 | 55,924 | 61,842 | 41,489 |
| San Jose..... | 153 | 153 | 124 | 1,430 | 1,200 | 1,221 | 5,611 | 4,298 | 3,292 | 2,368 | 1,788 | 1,442 |
| Santa Barbara..... | 51 | | | 265 | | | 1,169 | | | 473 | | |
| Santa Cruz..... | 34 | | | 274 | | | 1,161 | | | 493 | | |
| Stockton..... | 144 | 110 | 91 | 1,594 | 1,333 | 1,185 | 11,849 | 8,030 | 5,525 | 2,529 | 2,190 | 1,538 |
| Vallejo..... | 23 | | | 203 | | | 1,896 | | | 492 | | |
| COLORADO: | | | | | | | | | | | | |
| Colorado Springs..... | 59 | 49 | 34 | 516 | 410 | 409 | 1,733 | 1,191 | 845 | 919 | 690 | 480 |
| Cripple Creek..... | | 22 | 35 | | 51 | 167 | | 223 | 441 | | 147 | 266 |
| Denver..... | 766 | 722 | 574 | 12,058 | 9,672 | 8,500 | 51,538 | 26,600 | 37,906 | 20,611 | 15,669 | 13,434 |
| Leadville..... | | 32 | 34 | | 861 | 1,227 | | 5,446 | 5,893 | | 1,562 | 1,943 |
| Pueblo..... | 94 | 80 | 69 | 1,320 | 941 | 790 | 3,345 | 2,197 | 1,440 | 1,848 | 1,269 | 798 |
| Trinidad..... | 30 | | | 220 | | | 814 | | | 563 | | |
| CONNECTICUT: | | | | | | | | | | | | |
| Ansonia..... | 53 | 49 | 49 | 4,127 | 3,394 | 3,288 | 20,088 | 19,132 | 18,515 | 5,477 | 3,824 | 3,559 |
| Bridgeport..... | 367 | 306 | 286 | 25,775 | 19,492 | 17,038 | 65,609 | 44,586 | 33,536 | 27,062 | 22,292 | 16,249 |
| Danbury..... | 131 | 103 | 104 | 4,810 | 4,515 | 3,939 | 10,315 | 8,066 | 6,627 | 5,499 | 4,971 | 3,299 |
| Hartford..... | 396 | 340 | 322 | 14,627 | 11,221 | 10,677 | 40,680 | 28,974 | 23,829 | 22,817 | 14,487 | 12,490 |
| Meriden..... | 120 | 97 | 92 | 7,845 | 7,281 | 6,689 | 16,317 | 13,764 | 11,751 | 9,374 | 8,130 | 6,645 |
| Middletown..... | 58 | 65 | 60 | 2,434 | 2,318 | 2,465 | 4,855 | 4,361 | 4,152 | 2,012 | 1,788 | 1,799 |
| Naugatuck borough..... | 24 | 22 | 22 | 3,464 | 3,628 | 3,160 | 11,033 | 11,019 | 8,887 | 3,794 | 3,750 | 2,815 |
| New Britain..... | 111 | 95 | 82 | 13,513 | 10,073 | 8,019 | 22,021 | 14,969 | 11,096 | 13,095 | 9,262 | 6,590 |
| New Haven..... | 590 | 490 | 437 | 23,547 | 21,437 | 17,594 | 51,071 | 39,666 | 34,900 | 26,752 | 21,145 | 18,764 |
| New London..... | 70 | 57 | 54 | 2,225 | 2,554 | 1,963 | 4,483 | 4,710 | 4,221 | 1,922 | 2,183 | 1,939 |
| Norwich..... | 91 | 87 | 89 | 4,470 | 3,706 | 3,172 | 9,389 | 6,022 | 5,565 | 4,587 | 2,979 | 2,890 |
| Stamford..... | 86 | 62 | 49 | 3,984 | 3,341 | 2,445 | 5,739 | 5,890 | 5,029 | 3,605 | 3,560 | 2,230 |
| Torrington borough..... | 54 | 43 | 37 | 4,488 | 4,025 | 3,161 | 12,550 | 9,674 | 8,178 | 5,687 | 3,759 | 2,917 |
| Waterbury..... | 169 | 143 | 124 | 20,170 | 15,406 | 13,225 | 50,390 | 32,367 | 30,330 | 21,424 | 14,587 | 12,128 |
| Willimantic..... | 47 | 35 | 30 | 3,020 | 2,852 | 2,258 | 6,733 | 4,902 | 3,023 | 3,359 | 2,832 | 1,663 |
| DELAWARE: | | | | | | | | | | | | |
| Wilmington..... | 261 | 245 | 262 | 14,663 | 13,508 | 14,498 | 38,069 | 30,285 | 30,587 | 16,093 | 12,164 | 12,711 |
| DISTRICT OF COLUMBIA: | | | | | | | | | | | | |
| | 518 | 482 | 491 | 7,707 | 6,299 | 6,155 | 25,289 | 18,389 | 16,426 | 15,042 | 10,627 | 8,851 |
| FLORIDA: | | | | | | | | | | | | |
| Jacksonville..... | 114 | 125 | 74 | 1,988 | 2,650 | 1,238 | 6,722 | 5,340 | 1,799 | 2,725 | 2,550 | 993 |
| Key West..... | 56 | 73 | 53 | 2,431 | 2,466 | 1,809 | 3,965 | 4,254 | 3,068 | 2,322 | 2,448 | 1,837 |
| Pensacola..... | 60 | 39 | 32 | 961 | 1,206 | 578 | 1,963 | 1,937 | 1,053 | 1,066 | 1,117 | 551 |
| Tampa..... | 215 | 141 | 70 | 8,996 | 5,831 | 3,919 | 17,653 | 11,294 | 7,083 | 10,280 | 6,713 | 3,717 |
| GEORGIA: | | | | | | | | | | | | |
| Athens..... | 37 | 28 | 27 | 962 | 509 | 589 | 2,112 | 1,156 | 678 | 783 | 405 | 264 |
| Atlanta..... | 483 | 294 | 196 | 12,302 | 11,891 | 7,966 | 33,038 | 25,740 | 14,419 | 16,020 | 12,305 | 6,976 |
| Augusta..... | 71 | 64 | 80 | 5,073 | 4,839 | 5,563 | 10,456 | 8,829 | 7,984 | 3,854 | 2,876 | 2,837 |
| Brunswick..... | 23 | 29 | 25 | 385 | 254 | 361 | 672 | 407 | 703 | 414 | 229 | 394 |
| Columbus..... | 55 | 52 | 58 | 4,661 | 4,434 | 4,110 | 8,532 | 7,080 | 5,061 | 2,990 | 2,796 | 2,105 |
| Macon..... | 80 | 61 | 66 | 3,729 | 3,661 | 2,994 | 10,703 | 7,297 | 5,452 | 3,833 | 3,181 | 2,301 |
| Rome..... | 36 | | | 1,014 | | | 1,884 | | | 786 | | |
| Savannah..... | 137 | 122 | 82 | 2,727 | 3,230 | 2,249 | 6,734 | 6,340 | 3,750 | 3,285 | 3,086 | 1,942 |
| Waycross..... | 21 | | | 1,130 | | | 1,203 | | | 591 | | |
| IDaho: | | | | | | | | | | | | |
| Boise..... | 50 | | | 411 | | | 1,661 | | | 708 | | |

ABSTRACT OF THE CENSUS—MANUFACTURES.

CITIES OF 10,000 INHABITANTS OR OVER—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE EARNERS, VALUE OF PRODUCTS, AND VALUE ADDED BY MANUFACTURE: 1909, 1904, AND 1899—Continued.

[See explanatory note on the first page of this table.]

| CITY. | NUMBER OF ESTABLISHMENTS. | | | AVERAGE NUMBER OF WAGE EARNERS. | | | VALUE OF PRODUCTS. | | | VALUE ADDED BY MANUFACTURE (VALUE OF PRODUCTS LESS COST OF MATERIALS). | | |
|-----------------------|---------------------------|-------|-------|---------------------------------|---------|---------|-------------------------|---------|---------|--|---------|---------|
| | | | | | | | Expressed in thousands. | | | | | |
| | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 |
| ILLINOIS: | | | | | | | | | | | | |
| Alton..... | 69 | 62 | 59 | 2,429 | 3,069 | 2,174 | \$10,096 | \$8,697 | \$4,250 | \$2,834 | \$3,274 | \$1,778 |
| Aurora..... | 165 | 103 | 97 | 5,095 | 4,078 | 3,940 | 10,954 | 7,329 | 5,038 | 5,373 | 3,701 | 3,046 |
| Belleville..... | 119 | 96 | 89 | 1,872 | 1,765 | 1,335 | 4,615 | 4,357 | 2,873 | 2,291 | 2,570 | 1,938 |
| Bloomington..... | 107 | 81 | 68 | 2,077 | 2,275 | 1,671 | 4,868 | 5,777 | 3,012 | 2,341 | 2,285 | 1,417 |
| Calro..... | 56 | 57 | 53 | 1,237 | 1,435 | 1,501 | 4,440 | 4,382 | 3,116 | 1,493 | 1,544 | 1,216 |
| Canton..... | 33 | | | 1,262 | | | 2,942 | | | 1,759 | | |
| Champaign..... | 42 | 36 | 33 | 273 | 289 | 245 | 846 | 486 | 354 | 427 | 328 | 222 |
| Chicago..... | 9,656 | 8,159 | 7,668 | 293,077 | 241,984 | 221,191 | 1,281,171 | 955,036 | 797,870 | 487,701 | 365,122 | 295,657 |
| Chicago Heights..... | 79 | | | 3,953 | | | 10,839 | | | 5,227 | | |
| Cicero town..... | 7 | | | 658 | | | 1,461 | | | 728 | | |
| Danville..... | 76 | 70 | 72 | 1,744 | 1,884 | 957 | 3,351 | 3,304 | 1,914 | 1,021 | 1,039 | 867 |
| Decatur..... | 157 | 116 | 108 | 2,690 | 2,340 | 1,920 | 9,768 | 8,697 | 5,134 | 3,850 | 3,074 | 1,775 |
| East St. Louis..... | 139 | 91 | 58 | 5,252 | 4,505 | 3,106 | 18,228 | 10,586 | 6,241 | 6,788 | 4,890 | 2,563 |
| Elgin..... | 115 | 76 | 80 | 6,094 | 4,885 | 4,376 | 11,120 | 9,349 | 6,386 | 6,582 | 5,259 | 3,772 |
| Evansville..... | 60 | 33 | 27 | 837 | 738 | 400 | 3,778 | 2,551 | 830 | 1,428 | 968 | 468 |
| Freeport..... | 69 | 61 | 51 | 2,853 | 1,516 | 1,333 | 7,811 | 3,100 | 2,708 | 3,394 | 1,086 | 1,394 |
| Galesburg..... | 62 | 58 | 39 | 1,465 | 1,447 | 1,070 | 2,610 | 2,218 | 1,450 | 1,503 | 1,282 | 830 |
| Jacksonville..... | 57 | 55 | 55 | 947 | 890 | 1,066 | 2,209 | 1,982 | 1,684 | 992 | 880 | 834 |
| Joliet..... | 137 | 104 | 135 | 6,883 | 5,792 | 6,792 | 38,817 | 32,897 | 20,132 | 11,059 | 11,038 | 8,939 |
| Kankakee..... | 55 | 49 | 36 | 1,349 | 1,033 | 377 | 2,723 | 2,080 | 649 | 1,230 | 1,063 | 360 |
| La Salle..... | 29 | 24 | 20 | 1,293 | 1,107 | 917 | 5,308 | 3,158 | 3,309 | 2,380 | 1,280 | 912 |
| Lincoln..... | 40 | 30 | 30 | 220 | 230 | 188 | 570 | 784 | 375 | 280 | 409 | 219 |
| Mattoon..... | 35 | 34 | 39 | 948 | 1,022 | 632 | 1,434 | 1,300 | 704 | 705 | 787 | 418 |
| Moline..... | 66 | 62 | 55 | 5,449 | 3,987 | 4,138 | 20,892 | 13,158 | 9,802 | 9,708 | 6,263 | 4,704 |
| Oak Park village..... | 23 | | | 282 | | | 1,118 | | | 727 | | |
| Ottawa..... | | 54 | 57 | | 1,127 | 1,020 | | 2,078 | 1,738 | | 1,305 | 987 |
| Peoria..... | 283 | 263 | 201 | 5,981 | 5,834 | 5,906 | 63,061 | 60,420 | 44,509 | 45,288 | 44,585 | 31,584 |
| Quincy..... | 235 | 234 | 198 | 4,032 | 4,002 | 3,815 | 11,436 | 10,743 | 7,919 | 5,644 | 5,560 | 3,568 |
| Rock Island..... | 74 | 72 | 66 | 1,754 | 1,703 | 1,885 | 5,387 | 5,333 | 4,622 | 2,569 | 2,753 | 1,939 |
| Rockford..... | 205 | 180 | 169 | 6,300 | 7,239 | 5,851 | 22,266 | 15,276 | 11,022 | 11,084 | 7,210 | 4,820 |
| Springfield..... | 171 | 122 | 106 | 3,652 | 3,071 | 2,199 | 8,497 | 5,797 | 3,467 | 4,293 | 3,307 | 2,055 |
| Streator..... | 45 | 34 | 42 | 1,275 | 1,544 | 1,283 | 2,137 | 1,889 | 1,245 | 1,320 | 1,305 | 883 |
| Waukegan..... | 50 | 41 | 32 | 3,090 | 825 | 495 | 10,084 | 3,962 | 733 | 5,820 | 1,004 | 395 |
| INDIANA: | | | | | | | | | | | | |
| Anderson..... | 116 | 102 | 96 | 4,398 | 3,079 | 3,537 | 13,765 | 8,181 | 8,296 | 5,638 | 3,321 | 3,856 |
| East Chicago..... | 16 | | | 2,370 | | | 5,483 | | | 2,423 | | |
| Elkhart..... | 69 | 58 | 57 | 3,010 | 2,265 | 2,123 | 6,932 | 4,345 | 3,933 | 3,911 | 2,329 | 2,051 |
| Elwood..... | 37 | 32 | 46 | 2,073 | 1,779 | 2,745 | 8,408 | 6,111 | 9,433 | 2,159 | 1,714 | 2,678 |
| Evansville..... | 290 | 268 | 273 | 8,997 | 7,758 | 6,284 | 22,929 | 18,091 | 12,468 | 10,135 | 7,969 | 5,623 |
| Fort Wayne..... | 230 | 193 | 178 | 10,298 | 7,729 | 6,519 | 23,687 | 14,011 | 11,263 | 12,272 | 6,992 | 5,231 |
| Hammond..... | 49 | 38 | 21 | 3,841 | 1,548 | 2,683 | 15,580 | 7,671 | 25,070 | 8,929 | 5,126 | 4,808 |
| Huntington..... | 33 | 30 | 30 | 1,370 | 1,311 | 1,240 | 2,228 | 2,081 | 1,725 | 1,098 | 985 | 758 |
| Indianapolis..... | 855 | 810 | 697 | 31,815 | 26,725 | 20,985 | 126,522 | 82,228 | 59,322 | 42,371 | 30,465 | 21,035 |
| Jeffersonville..... | 35 | 33 | 34 | 760 | 1,492 | 1,510 | 1,916 | 4,526 | 3,772 | 833 | 1,699 | 1,336 |
| Kokomo..... | 72 | 61 | 62 | 2,051 | 1,917 | 1,355 | 5,451 | 3,651 | 2,002 | 2,409 | 2,057 | 1,052 |
| Lafayette..... | 69 | 80 | 85 | 1,660 | 1,786 | 1,343 | 5,542 | 4,031 | 3,514 | 2,090 | 1,928 | 1,524 |
| Laporte..... | 41 | | | 1,674 | | | 3,972 | | | 2,168 | | |
| Logansport..... | 68 | 61 | 68 | 2,160 | 1,720 | 1,310 | 4,201 | 2,956 | 2,100 | 2,219 | 1,394 | 1,074 |
| Marion..... | 80 | 96 | 81 | 2,269 | 2,219 | 2,843 | 4,442 | 4,034 | 4,593 | 2,118 | 2,296 | 2,394 |
| Michigan City..... | 48 | 52 | 41 | 2,887 | 3,140 | 2,912 | 8,290 | 6,814 | 6,032 | 2,925 | 2,334 | 2,071 |
| Mishawaka..... | 42 | | | 3,445 | | | 10,883 | | | 5,613 | | |
| Muncie..... | 102 | 97 | 90 | 4,033 | 2,855 | 3,848 | 9,684 | 5,891 | 7,042 | 4,210 | 2,571 | 3,194 |
| New Albany..... | 95 | 93 | 95 | 1,910 | 2,240 | 2,137 | 3,493 | 3,835 | 3,638 | 1,607 | 1,794 | 1,522 |
| Peru..... | 31 | 43 | 39 | 610 | 912 | 1,136 | 1,097 | 1,843 | 1,438 | 615 | 718 | 667 |
| Richmond..... | 107 | 88 | 88 | 3,621 | 2,970 | 2,688 | 10,374 | 6,732 | 4,754 | 5,256 | 3,731 | 2,523 |
| South Bend..... | 218 | 156 | 131 | 11,789 | 8,697 | 7,678 | 27,854 | 15,180 | 12,000 | 12,601 | 7,010 | 6,119 |
| Terre Haute..... | 170 | 178 | 143 | 4,359 | 4,044 | 4,079 | 21,793 | 18,068 | 20,290 | 13,136 | 10,361 | 18,927 |
| Vincennes..... | 84 | 62 | 48 | 1,233 | 1,354 | 906 | 4,234 | 3,029 | 1,070 | 1,818 | 1,288 | 1,038 |
| IOWA: | | | | | | | | | | | | |
| Boone..... | 34 | 34 | 35 | 330 | 367 | 485 | 682 | 714 | 629 | 399 | 415 | 315 |
| Burlington..... | 128 | 109 | 125 | 4,160 | 2,915 | 2,054 | 8,443 | 5,770 | 4,450 | 3,798 | 3,073 | 2,008 |
| Cedar Rapids..... | 153 | 134 | 89 | 3,565 | 3,259 | 2,374 | 24,824 | 10,280 | 11,136 | 6,174 | 4,000 | 2,973 |
| Ciuiton..... | 69 | 89 | 81 | 2,414 | 2,153 | 2,502 | 7,480 | 4,906 | 6,203 | 2,850 | 2,260 | 2,283 |
| Council Bluffs..... | 101 | 71 | 74 | 1,434 | 1,001 | 788 | 3,709 | 1,024 | 1,602 | 1,812 | 994 | 868 |
| Davenport..... | 232 | 179 | 163 | 4,231 | 3,840 | 3,403 | 13,802 | 13,696 | 9,872 | 7,231 | 4,857 | 3,815 |
| Des Moines..... | 387 | 291 | 218 | 5,383 | 4,155 | 3,479 | 23,685 | 15,085 | 8,397 | 10,020 | 6,441 | 4,259 |
| Dubuque..... | 156 | 160 | 161 | 5,108 | 4,274 | 4,058 | 15,376 | 9,279 | 9,651 | 6,266 | 4,573 | 4,283 |
| Fort Dodge..... | 44 | 42 | 30 | 1,115 | 901 | 390 | 2,975 | 3,026 | 1,006 | 1,163 | 1,324 | 327 |
| Iowa City..... | 44 | | | 282 | | | 805 | | | 465 | | |
| Keokuk..... | 91 | 80 | 88 | 1,541 | 1,533 | 1,302 | 7,399 | 4,226 | 3,649 | 2,715 | 1,992 | 1,458 |
| Marshalltown..... | 49 | 44 | 44 | 1,305 | 888 | 1,112 | 4,822 | 3,090 | 3,967 | 1,643 | 950 | 1,161 |
| Mason City..... | 49 | | | 807 | | | 2,881 | | | 1,085 | | |
| Muscatine..... | 113 | 107 | 105 | 3,496 | 2,703 | 2,589 | 6,166 | 5,040 | 5,220 | 3,428 | 2,025 | 1,705 |
| Ottumwa..... | 93 | 62 | 61 | 2,050 | 2,304 | 1,820 | 14,838 | 10,374 | 8,683 | 2,672 | 1,841 | 1,783 |
| Sioux City..... | 136 | 106 | 123 | 3,750 | 2,299 | 2,463 | 37,425 | 14,761 | 14,227 | 7,037 | 3,365 | 4,097 |
| Waterloo..... | 108 | 90 | 55 | 3,124 | 1,674 | 804 | 8,999 | 4,694 | 2,088 | 4,357 | 1,945 | 745 |
| KANSAS: | | | | | | | | | | | | |
| Atchison..... | 68 | 60 | 39 | 824 | 708 | 583 | 4,405 | 3,829 | 2,093 | 1,208 | 873 | 591 |
| Colleyville..... | 47 | | | 1,060 | | | 4,752 | | | 1,260 | | |
| Fort Scott..... | 36 | 46 | 32 | 266 | 244 | 389 | 1,010 | 786 | 714 | 340 | 323 | 335 |
| Galena..... | | 15 | 19 | | 130 | 114 | | 797 | 421 | | 109 | |
| Hutchinson..... | 67 | 44 | 42 | 667 | 510 | 530 | 3,614 | 2,031 | 1,641 | 941 | 644 | 503 |
| Independence..... | 31 | | | 252 | | | 757 | | | 365 | | |
| Kansas City..... | 165 | 100 | 114 | 12,294 | 10,529 | 9,483 | 164,081 | 96,473 | 80,023 | 19,691 | 12,590 | 11,148 |
| Lawrence..... | 40 | 39 | 39 | 422 | 402 | 461 | 1,653 | 658 | 1,239 | 498 | 841 | 347 |
| Leavenworth..... | 79 | 89 | 89 | 1,311 | 1,321 | 1,141 | 4,875 | 4,152 | 3,251 | 1,677 | 1,564 | 1,270 |
| Parsons..... | 25 | | | 1,130 | | | 1,620 | | | 891 | | |
| Pittsburg..... | 49 | 34 | 33 | 972 | 919 | 882 | 1,817 | 1,494 | 1,434 | 1,093 | 848 | 523 |
| Topeka..... | 202 | 154 | 145 | 4,244 | 3,953 | 2,874 | 17,821 | 14,449 | 8,357 | 5,562 | 4,216 | 3,079 |
| Wichita..... | 225 | 110 | 103 | 2,783 | 1,262 | 803 | 22,564 | 7,890 | 3,329 | 5,579 | 1,963 | 973 |

1 While the population for 1900 was in excess of 10,000, statistics for that census are not available.

2 Does not include statistics for Gary.

STATES, CITIES, AND INDUSTRIES.

531

CITIES OF 10,000 INHABITANTS OR OVER—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE EARNERS, VALUE OF PRODUCTS, AND VALUE ADDED BY MANUFACTURE: 1909, 1904, AND 1899—Continued.

[See explanatory note on the first page of this table.]

| CITY. | NUMBER OF ESTABLISHMENTS. | | | AVERAGE NUMBER OF WAGE EARNERS. | | | VALUE OF PRODUCTS. | | | VALUE ADDED BY MANUFACTURE (VALUE OF PRODUCTS LESS COST OF MATERIALS). | | |
|-------------------------|---------------------------|-------|-------|---------------------------------|--------|--------|--------------------|---------|---------|--|---------|---------|
| | | | | | | | | | | | | |
| | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 |
| Expressed in thousands. | | | | | | | | | | | | |
| KENTUCKY: | | | | | | | | | | | | |
| Covington..... | 196 | 199 | 204 | 3,942 | 3,703 | 3,212 | \$8,712 | \$9,109 | \$7,479 | \$4,241 | \$3,499 | \$2,962 |
| Frankfort..... | 31 | 30 | 34 | 537 | 525 | 281 | 3,083 | 1,737 | 1,397 | 1,115 | 814 | 498 |
| Henderson..... | 43 | 34 | 26 | 1,088 | 459 | 352 | 2,932 | 1,365 | 1,032 | 1,210 | 603 | 451 |
| Lexington..... | 85 | 84 | 88 | 1,032 | 1,114 | 797 | 2,851 | 2,775 | 1,899 | 1,602 | 1,389 | 903 |
| Louisville..... | 903 | 842 | 860 | 27,023 | 24,985 | 23,062 | 101,264 | 83,204 | 66,170 | 47,522 | 37,522 | 31,234 |
| Newport..... | 144 | 105 | 134 | 2,632 | 1,958 | 1,855 | 6,491 | 5,231 | 2,549 | 3,125 | 2,259 | 2,075 |
| Owensboro..... | 69 | 60 | 51 | 1,064 | 1,392 | 890 | 3,505 | 3,319 | 1,746 | 1,253 | 1,504 | 825 |
| Paducah..... | 91 | 84 | 70 | 2,613 | 2,841 | 2,061 | 4,967 | 4,443 | 2,977 | 2,019 | 2,508 | 1,642 |
| LOUISIANA: | | | | | | | | | | | | |
| Alexandria..... | 30 | | | 513 | | | 1,279 | | | 681 | | |
| Baton Rouge..... | 33 | 37 | 13 | 357 | 630 | 329 | 658 | 1,393 | 719 | 322 | 785 | 331 |
| Lake Charles..... | 33 | | | 736 | | | 2,251 | | | 982 | | |
| Monroe..... | 23 | | | 681 | | | 1,255 | | | 719 | | |
| New Orleans..... | 848 | 690 | 688 | 17,186 | 17,468 | 16,185 | 78,794 | 81,411 | 57,440 | 30,062 | 22,583 | 17,061 |
| Shreveport..... | 61 | 63 | 46 | 1,114 | 1,162 | 736 | 2,643 | 2,828 | 1,556 | 1,554 | 1,554 | 655 |
| MAINE: | | | | | | | | | | | | |
| Auburn..... | 83 | 72 | 67 | 2,452 | 2,652 | 2,749 | 8,543 | 6,407 | 5,965 | 3,653 | 1,990 | 1,978 |
| Augusta..... | 40 | 44 | 52 | 2,096 | 1,860 | 2,018 | 4,662 | 3,887 | 3,213 | 2,178 | 2,000 | 2,101 |
| Bangor..... | 122 | 87 | 101 | 1,327 | 1,496 | 1,511 | 3,346 | 3,408 | 3,336 | 1,499 | 1,671 | 1,431 |
| Bath..... | | 46 | 54 | | 1,950 | 2,097 | | 3,654 | 3,697 | | 1,672 | 1,789 |
| Biddeford..... | 43 | 33 | 39 | 5,076 | 4,764 | 4,375 | 9,012 | 6,949 | 5,472 | 4,114 | 2,813 | 2,506 |
| Lewiston..... | 83 | 81 | 84 | 6,788 | 6,167 | 6,677 | 10,475 | 8,528 | 7,779 | 5,200 | 3,811 | 4,061 |
| Portland..... | 271 | 243 | 234 | 4,902 | 4,345 | 3,763 | 11,950 | 9,133 | 7,334 | 5,941 | 4,778 | 3,731 |
| Waterville..... | 33 | 40 | 29 | 1,812 | 2,011 | 1,926 | 3,179 | 3,069 | 2,284 | 1,408 | 1,296 | 1,238 |
| MARYLAND: | | | | | | | | | | | | |
| Baltimore..... | 2,502 | 2,158 | 2,274 | 71,444 | 65,050 | 66,571 | 186,978 | 150,171 | 135,108 | 79,954 | 69,616 | 59,885 |
| Cumberland..... | 71 | 72 | 56 | 1,936 | 2,276 | 1,643 | 4,534 | 4,305 | 2,900 | 1,858 | 1,917 | 1,226 |
| Frederick..... | 55 | 56 | 54 | 1,026 | 1,032 | 939 | 2,911 | 1,938 | 1,438 | 836 | 715 | 519 |
| Hagerstown..... | 76 | 67 | 80 | 1,718 | 2,210 | 1,515 | 3,197 | 2,627 | 1,820 | 1,369 | 1,376 | 721 |
| MASSACHUSETTS: | | | | | | | | | | | | |
| Adams town..... | 31 | 23 | 26 | 3,991 | 3,994 | 3,182 | 6,410 | 5,402 | 3,994 | 3,328 | 2,804 | 2,181 |
| Arlington town..... | 19 | 18 | 12 | 283 | 209 | 122 | 695 | 493 | 256 | 304 | 267 | 144 |
| Attleborough town..... | 128 | 108 | 108 | 6,429 | 5,044 | 4,811 | 15,160 | 10,050 | 8,751 | 8,347 | 5,399 | 4,955 |
| Beverly..... | 63 | 71 | 73 | 4,487 | 2,083 | 2,275 | 8,653 | 4,101 | 3,781 | 5,302 | 1,778 | 1,432 |
| Boston..... | 3,155 | 2,747 | 2,878 | 69,637 | 59,190 | 52,853 | 237,457 | 184,351 | 162,765 | 112,880 | 99,748 | 89,479 |
| Brockton..... | 196 | 201 | 186 | 14,737 | 13,889 | 10,296 | 45,972 | 37,791 | 24,855 | 17,407 | 15,238 | 9,322 |
| Brookline town..... | 16 | 13 | 8 | 340 | 495 | 324 | 532 | 733 | 485 | 336 | 462 | 296 |
| Cambridge..... | 275 | 262 | 243 | 15,200 | 14,586 | 11,070 | 44,227 | 42,407 | 29,092 | 20,601 | 17,290 | 12,319 |
| Chelsea..... | 110 | 130 | 120 | 5,954 | 4,939 | 2,959 | 17,003 | 13,879 | 9,519 | 6,434 | 5,572 | 4,056 |
| Chicopee..... | 58 | 40 | 46 | 7,260 | 4,670 | 4,085 | 9,219 | 7,716 | 5,399 | 3,267 | 2,386 | 2,099 |
| Clinton town..... | 39 | 35 | 22 | 4,123 | 3,482 | 3,836 | 7,845 | 5,458 | 5,043 | 3,629 | 2,050 | 2,326 |
| Everett..... | 62 | 51 | 52 | 2,680 | 2,186 | 1,877 | 8,747 | 6,136 | 4,637 | 4,241 | 3,013 | 1,968 |
| Fall River..... | 288 | 234 | 240 | 37,139 | 26,836 | 30,646 | 64,146 | 43,473 | 39,103 | 28,622 | 17,377 | 21,033 |
| Fitchburg..... | 122 | 107 | 115 | 8,497 | 6,498 | 6,218 | 23,252 | 15,391 | 13,008 | 8,570 | 5,378 | 5,328 |
| Framingham town..... | 27 | 36 | 34 | 3,069 | 2,484 | 2,207 | 6,917 | 4,174 | 3,007 | 3,506 | 1,637 | 1,315 |
| Gardner town..... | 52 | 50 | 46 | 3,617 | 3,168 | 2,896 | 6,485 | 5,019 | 4,586 | 2,652 | 2,449 | 2,132 |
| Gloucester..... | 102 | 132 | 137 | 2,181 | 1,763 | 2,367 | 7,753 | 6,921 | 6,293 | 2,983 | 2,239 | 2,061 |
| Greenfield town..... | 47 | | | 1,251 | | | 2,801 | | | 1,767 | | |
| Haverhill..... | 346 | 320 | 390 | 11,689 | 9,574 | 9,761 | 35,377 | 24,447 | 23,419 | 13,691 | 10,190 | 8,425 |
| Holyoke..... | 187 | 179 | 158 | 16,513 | 14,685 | 12,519 | 40,097 | 30,731 | 24,093 | 17,796 | 14,152 | 11,357 |
| Hyde Park town..... | 40 | 40 | 33 | 3,420 | 3,991 | 2,483 | 7,336 | 6,739 | 4,384 | 3,985 | 3,158 | 1,877 |
| Lawrence..... | 162 | 187 | 167 | 30,542 | 21,910 | 20,899 | 79,993 | 48,067 | 41,742 | 34,553 | 16,021 | 14,900 |
| Leominster town..... | 94 | 65 | 70 | 5,601 | 4,127 | 3,412 | 10,531 | 7,502 | 5,397 | 4,955 | 3,556 | 2,628 |
| Lowell..... | 320 | 256 | 286 | 32,575 | 29,303 | 29,254 | 60,271 | 46,879 | 41,293 | 27,440 | 19,966 | 20,924 |
| Lynn..... | 431 | 431 | 423 | 27,368 | 21,540 | 16,377 | 71,503 | 55,003 | 39,347 | 30,142 | 22,357 | 14,876 |
| Malden..... | 86 | 59 | 53 | 2,900 | 2,954 | 2,416 | 8,296 | 11,236 | 6,632 | 3,818 | 7,191 | 2,515 |
| Marlboro..... | 59 | 46 | 50 | 4,265 | 3,479 | 2,524 | 10,382 | 7,469 | 4,498 | 4,067 | 2,883 | 1,664 |
| Medford..... | 40 | 37 | 36 | 560 | 484 | 575 | 2,045 | 872 | 1,132 | 785 | 436 | 592 |
| Medrose..... | 15 | 24 | 16 | 1,038 | 1,571 | 1,180 | 2,825 | 9,451 | 3,416 | 1,238 | 6,536 | 1,270 |
| Methuen town..... | 29 | | | 1,572 | | | 3,476 | | | 1,259 | | |
| Milford town..... | 53 | 44 | 50 | 1,801 | 1,782 | 1,357 | 4,442 | 3,390 | 2,552 | 2,053 | 1,614 | 1,096 |
| New Bedford..... | 207 | 176 | 171 | 26,566 | 17,855 | 15,263 | 53,238 | 29,469 | 23,397 | 24,674 | 13,378 | 11,614 |
| Newburyport..... | 74 | 69 | 64 | 3,215 | 2,955 | 2,801 | 6,931 | 6,810 | 5,141 | 3,150 | 2,548 | 2,060 |
| Newton..... | 46 | 48 | 45 | 2,174 | 1,893 | 1,823 | 6,279 | 4,141 | 3,679 | 2,896 | 1,999 | 1,785 |
| North Adams..... | 60 | 58 | 68 | 5,414 | 5,502 | 6,312 | 10,315 | 8,099 | 10,741 | 4,739 | 4,025 | 5,694 |
| Northampton..... | 71 | 77 | 66 | 3,150 | 2,963 | 2,635 | 6,999 | 5,756 | 4,767 | 3,830 | 2,714 | 2,167 |
| Peabody town..... | 74 | 76 | 86 | 4,850 | 3,953 | 2,061 | 15,549 | 10,267 | 8,944 | 5,357 | 3,469 | 1,870 |
| Pittsfield..... | 71 | 44 | 69 | 6,353 | 4,455 | 3,198 | 15,215 | 8,577 | 5,754 | 6,687 | 3,948 | 2,876 |
| Plymouth town..... | 32 | 35 | 27 | 2,912 | 2,300 | 1,511 | 11,618 | 11,116 | 5,530 | 3,143 | 2,548 | 1,966 |
| Quincy..... | 183 | 161 | 153 | 5,492 | 5,371 | 2,128 | 10,505 | 8,982 | 3,612 | 6,661 | 5,278 | 2,103 |
| Revere town..... | 14 | 12 | 17 | 101 | 125 | 87 | 497 | | | 115 | 106 | 105 |
| Salem..... | 155 | 143 | 162 | 6,238 | 5,945 | 5,625 | 14,576 | 12,262 | 10,711 | 5,936 | 4,281 | 4,127 |
| Somerville..... | 114 | 78 | 85 | 5,280 | 3,474 | 3,528 | 38,687 | 22,955 | 20,065 | 6,764 | 3,779 | 3,344 |
| Southbridge town..... | 36 | 32 | 32 | 4,037 | 3,223 | 2,667 | 6,269 | 4,262 | 3,512 | 3,144 | 1,922 | 1,730 |
| Springfield..... | 346 | 296 | 278 | 11,855 | 10,523 | 8,152 | 31,773 | 25,860 | 18,155 | 17,410 | 13,490 | 9,293 |
| Taunton..... | 146 | 127 | 114 | 7,407 | 6,008 | 6,590 | 15,289 | 13,645 | 11,544 | 7,605 | 5,958 | 6,004 |
| Wakefield town..... | 23 | 22 | 25 | 2,280 | 1,804 | 1,436 | 5,527 | 4,808 | 2,647 | 2,692 | 1,970 | 1,395 |
| Waltham..... | 80 | 60 | 74 | 6,037 | 6,208 | 4,861 | 7,814 | 7,150 | 5,890 | 5,370 | 5,083 | 4,001 |
| Watertown town..... | 25 | 20 | 27 | 4,335 | 3,322 | 1,835 | 11,116 | 5,868 | 4,008 | 3,476 | 1,927 | 1,546 |
| Webster town..... | 23 | 16 | 20 | 3,469 | 3,107 | 2,577 | 7,362 | 5,818 | 4,441 | 4,494 | 3,567 | 2,536 |
| Westfield town..... | 91 | 86 | 97 | 3,060 | 2,634 | 2,370 | 6,362 | 4,922 | 3,780 | 2,423 | 1,924 | 2,211 |
| Weymouth town..... | 41 | 46 | 51 | 1,991 | 1,841 | 1,622 | 42 | | | 17 | | |
| Winthrop town..... | 7 | | | | | | 5,408 | 4,654 | 4,003 | 2,394 | 1,846 | 1,124 |
| Woburn..... | 59 | 52 | 47 | 1,653 | 1,482 | 1,516 | 77,148 | 52,145 | 46,793 | 24,547 | 25,134 | 23,328 |
| Worcester..... | 580 | 470 | 465 | 28,221 | 22,796 | 22,583 | | | | | | |

CITIES OF 10,000 INHABITANTS OR OVER—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE EARNERS, VALUE OF PRODUCTS, AND VALUE ADDED BY MANUFACTURE: 1909, 1904, AND 1899—Continued.

[See explanatory note on the first page of this table.]

Table 113—Continued.

| CITY. | NUMBER OF ESTABLISHMENTS. | | | AVERAGE NUMBER OF WAGE EARNERS. | | | VALUE OF PRODUCTS. | | | VALUE ADDED BY MANUFACTURE (VALUE OF PRODUCTS LESS COST OF MATERIALS). | | |
|-----------------------|---------------------------|-------|-------|---------------------------------|--------|--------|-------------------------|---------|---------|--|---------|---------|
| | | | | | | | Expressed in thousands. | | | | | |
| | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 |
| MICHIGAN: | | | | | | | | | | | | |
| Adrian..... | 80 | 65 | 63 | 1,059 | 1,502 | 1,030 | \$6,085 | \$4,897 | \$2,125 | \$1,035 | \$2,068 | \$1,227 |
| Alpena..... | 58 | 57 | 46 | 1,432 | 1,245 | 1,202 | 3,964 | 2,005 | 2,273 | 1,063 | 1,220 | 997 |
| Ann Arbor..... | 63 | 65 | 71 | 673 | 549 | 623 | 1,860 | 1,380 | 1,377 | 856 | 612 | 592 |
| Battle Creek..... | 105 | 120 | 75 | 4,175 | 3,389 | 2,051 | 20,174 | 12,208 | 6,301 | 13,106 | 8,314 | 4,201 |
| Bay City..... | 182 | 173 | 177 | 4,737 | 4,456 | 4,309 | 10,294 | 8,809 | 9,011 | 4,047 | 3,861 | 3,776 |
| Detroit..... | 2,036 | 1,362 | 1,259 | 81,011 | 48,483 | 38,373 | 252,992 | 128,247 | 88,306 | 122,774 | 61,660 | 41,359 |
| Escanaba..... | 39 | 34 | 26 | 720 | 949 | 520 | 1,074 | 1,333 | 610 | 710 | 929 | 360 |
| Flint..... | 104 | 70 | 63 | 7,088 | 2,161 | 1,900 | 24,118 | 6,177 | 4,713 | 10,147 | 2,408 | 1,959 |
| Grand Rapids..... | 524 | 388 | 382 | 17,690 | 15,514 | 12,929 | 42,231 | 30,600 | 22,220 | 22,495 | 16,268 | 11,108 |
| Holland..... | 50 | ..... | ..... | 1,940 | ..... | ..... | 4,622 | ..... | ..... | 2,038 | ..... | ..... |
| Ironwood..... | 14 | 13 | 14 | 201 | 87 | 90 | 377 | 202 | 145 | 176 | 124 | 80 |
| Ishpeming..... | 19 | 15 | 14 | 66 | 73 | 80 | 132 | 247 | 195 | 80 | 105 | 100 |
| Jackson..... | 169 | 147 | 117 | 4,797 | 3,967 | 3,715 | 14,006 | 8,348 | 0,710 | 5,838 | 4,070 | 2,902 |
| Kalamazoo..... | 193 | 157 | 120 | 6,272 | 5,660 | 3,870 | 17,904 | 13,142 | 7,180 | 8,399 | 6,246 | 3,283 |
| Lansing..... | 169 | 98 | 74 | 5,285 | 2,982 | 1,425 | 16,507 | 6,887 | 2,942 | 7,705 | 3,414 | 1,310 |
| Manistee..... | 64 | 47 | 56 | 2,125 | 2,084 | 2,103 | 3,344 | 3,257 | 3,625 | 2,055 | 1,883 | 2,249 |
| Marquette..... | 34 | 31 | 29 | 498 | 738 | 836 | 1,254 | 2,304 | 1,585 | 608 | 872 | 772 |
| Menominee..... | 52 | 45 | 38 | 1,700 | 1,489 | 1,703 | 3,728 | 2,974 | 4,070 | 2,071 | 1,601 | 2,239 |
| Muskegon..... | 101 | 70 | 67 | 4,522 | 3,078 | 3,078 | 9,048 | 6,310 | 4,528 | 4,710 | 2,793 | 2,259 |
| Pontiac..... | 42 | 47 | 47 | 1,739 | 1,206 | 1,092 | 5,894 | 3,047 | 2,471 | 2,654 | 1,812 | 869 |
| Port Huron..... | 82 | 74 | 78 | 1,580 | 2,130 | 2,020 | 3,588 | 3,715 | 3,027 | 1,639 | 1,908 | 1,875 |
| Saginaw..... | 203 | 170 | 184 | 5,990 | 4,445 | 4,205 | 18,833 | 10,070 | 8,663 | 8,424 | 4,712 | 3,569 |
| Sault Ste. Marie..... | 47 | 38 | 33 | 1,005 | 805 | 317 | 4,619 | 2,412 | 728 | 1,496 | 985 | 449 |
| Traverse City..... | 61 | 46 | 36 | 1,220 | 1,108 | 909 | 2,289 | 2,177 | 1,201 | 1,106 | 1,079 | 686 |
| MINNESOTA: | | | | | | | | | | | | |
| Duluth..... | 194 | 163 | 126 | 6,083 | 3,987 | 3,658 | 17,180 | 10,130 | 7,811 | 8,330 | 5,505 | 4,152 |
| Mankato..... | 63 | 54 | 47 | 807 | 724 | 520 | 3,723 | 3,422 | 1,887 | 995 | 893 | 532 |
| Minneapolis..... | 1,102 | 876 | 789 | 26,902 | 21,071 | 19,620 | 105,405 | 121,163 | 94,408 | 45,412 | 32,281 | 25,498 |
| St. Cloud..... | 69 | 39 | 30 | 626 | 414 | 607 | 2,299 | 1,800 | 1,501 | 957 | 583 | 484 |
| St. Paul..... | 719 | 614 | 537 | 19,339 | 14,303 | 13,019 | 58,090 | 38,319 | 30,050 | 28,090 | 18,831 | 14,144 |
| Stillwater..... | 38 | 36 | 32 | 688 | 955 | 829 | 2,080 | 2,784 | 1,801 | 1,038 | 1,300 | 761 |
| Virginia..... | 21 | ..... | ..... | 188 | ..... | ..... | 519 | ..... | ..... | 357 | ..... | ..... |
| Winona..... | 99 | 86 | 72 | 2,032 | 1,953 | 1,905 | 11,199 | 7,850 | 6,013 | 3,869 | 2,570 | 2,012 |
| MISSISSIPPI: | | | | | | | | | | | | |
| Hattiesburg..... | 29 | ..... | ..... | 648 | ..... | ..... | 1,251 | ..... | ..... | 626 | ..... | ..... |
| Jackson..... | 46 | 53 | 42 | 799 | 1,346 | 834 | 3,113 | 3,207 | 1,924 | 1,145 | 1,215 | 809 |
| Meridian..... | 54 | 27 | 16 | 1,524 | 310 | 648 | 4,238 | 820 | 1,115 | 1,704 | 317 | 534 |
| Natchez..... | 27 | 32 | 24 | 428 | 1,031 | 987 | 1,114 | 1,888 | 1,308 | 425 | 895 | 652 |
| Vicksburg..... | 47 | ..... | ..... | 1,202 | ..... | ..... | 2,220 | ..... | ..... | 1,081 | ..... | ..... |
| MISSOURI: | | | | | | | | | | | | |
| Hannibal..... | 66 | 58 | 66 | 2,445 | 1,811 | 1,238 | 0,105 | 3,504 | 2,699 | 1,879 | 1,408 | 964 |
| Jefferson City..... | 35 | 45 | 41 | 1,336 | 262 | 299 | 5,446 | 3,927 | 3,061 | 1,794 | 1,440 | 930 |
| Joplin..... | 77 | 56 | 45 | 830 | 680 | 682 | 4,136 | 3,096 | 2,325 | 1,778 | 1,046 | 769 |
| Kansas City..... | 902 | 612 | 585 | 14,643 | 11,039 | 9,099 | 54,704 | 35,573 | 23,588 | 23,742 | 10,448 | 11,057 |
| Moberly..... | 31 | 28 | 32 | 999 | 406 | 656 | 1,984 | 801 | 702 | 892 | 402 | 432 |
| St. Joseph..... | 261 | 219 | 184 | 5,390 | 4,663 | 5,095 | 17,626 | 11,574 | 11,302 | 6,573 | 4,754 | 4,420 |
| St. Louis..... | 2,607 | 2,482 | 2,646 | 87,371 | 82,608 | 64,832 | 328,495 | 267,307 | 193,733 | 140,306 | 129,567 | 91,895 |
| Sedalia..... | 75 | 50 | 57 | 935 | 974 | 909 | 2,333 | 1,692 | 1,283 | 1,117 | 867 | 608 |
| Springfield..... | 108 | 82 | 79 | 2,131 | 2,158 | 1,710 | 5,382 | 5,203 | 3,434 | 2,334 | 1,901 | 1,443 |
| Webb City..... | 26 | 10 | 12 | 170 | 138 | 126 | 777 | 638 | 354 | 204 | 243 | 140 |
| MONTANA: | | | | | | | | | | | | |
| Anaconda..... | 13 | ..... | ..... | 97 | ..... | ..... | 591 | ..... | ..... | 434 | ..... | ..... |
| Billings..... | 37 | ..... | ..... | 226 | ..... | ..... | 1,243 | ..... | ..... | 478 | ..... | ..... |
| Butte..... | 66 | 54 | 56 | 662 | 478 | 411 | 2,404 | 1,700 | 1,517 | 1,544 | 1,192 | 739 |
| Helena..... | 44 | 34 | 27 | 420 | 349 | 204 | 1,303 | 1,103 | 776 | 810 | 735 | 440 |
| Missoula..... | 26 | ..... | ..... | 428 | ..... | ..... | 1,171 | ..... | ..... | 769 | ..... | ..... |
| NEBRASKA: | | | | | | | | | | | | |
| Grand Island..... | 44 | ..... | ..... | 616 | ..... | ..... | 1,837 | ..... | ..... | 826 | ..... | ..... |
| Lincoln..... | 167 | 128 | 81 | 2,140 | 1,617 | 1,104 | 7,010 | 5,222 | 2,764 | 3,140 | 2,531 | 1,168 |
| Omaha..... | 432 | 318 | 307 | 8,023 | 5,822 | 5,270 | 60,854 | 54,004 | 38,074 | 17,439 | 11,111 | 18,146 |
| South Omaha..... | 71 | 41 | 41 | 6,306 | 5,662 | 6,327 | 62,436 | 67,415 | 69,509 | 14,763 | 8,222 | 8,491 |
| NEVADA: | | | | | | | | | | | | |
| Reno..... | 40 | ..... | ..... | 310 | ..... | ..... | 1,862 | ..... | ..... | 691 | ..... | ..... |
| NEW HAMPSHIRE: | | | | | | | | | | | | |
| Berlin..... | 20 | 17 | 17 | 1,790 | 2,282 | 2,810 | 5,897 | 5,989 | 5,985 | 2,243 | 2,324 | 2,874 |
| Concord..... | 111 | 80 | 86 | 2,693 | 2,654 | 2,432 | 0,477 | 5,374 | 4,211 | 2,931 | 2,543 | 2,123 |
| Dover..... | 51 | 42 | 40 | 3,030 | 2,850 | 2,797 | 0,370 | 6,043 | 5,440 | 3,134 | 2,173 | 2,157 |
| Keene..... | 64 | 50 | 57 | 1,709 | 1,685 | 1,576 | 3,483 | 2,691 | 2,584 | 1,646 | 1,314 | 1,138 |
| Laconia..... | 43 | 55 | 53 | 2,146 | 1,957 | 1,535 | 3,818 | 3,097 | 2,152 | 1,805 | 1,377 | 958 |
| Manchester..... | 175 | 155 | 166 | 24,735 | 17,579 | 17,862 | 46,812 | 30,697 | 24,628 | 16,315 | 11,990 | 10,825 |
| Nashua..... | 104 | 78 | 72 | 7,312 | 6,159 | 5,777 | 17,320 | 12,858 | 10,096 | 6,947 | 4,375 | 3,970 |
| Portsmouth..... | 36 | 27 | 38 | 992 | 638 | 1,323 | 2,871 | 2,602 | 3,901 | 1,510 | 1,714 | 2,086 |
| NEW JERSEY: | | | | | | | | | | | | |
| Asbury Park..... | 27 | ..... | ..... | 264 | ..... | ..... | 602 | ..... | ..... | 308 | ..... | ..... |
| Atlantic City..... | 94 | 62 | 30 | 726 | 881 | 305 | 2,200 | 975 | 608 | 1,124 | 610 | 327 |
| Bayonne..... | 97 | 58 | 63 | 7,519 | 7,057 | 4,070 | 73,641 | 60,634 | 38,601 | 14,700 | 13,650 | 4,807 |
| Bloomfield town..... | 45 | 33 | 39 | 2,957 | 1,893 | 1,012 | 5,895 | 4,045 | 3,371 | 3,594 | 2,895 | 1,665 |
| Bridgeton..... | 74 | 61 | 62 | 2,387 | 2,270 | 2,182 | 4,070 | 2,964 | 2,250 | 2,073 | 1,725 | 1,216 |
| Camden..... | 365 | 298 | 322 | 16,527 | 12,661 | 7,742 | 49,138 | 33,587 | 17,970 | 21,754 | 13,164 | 7,528 |
| East Orange..... | 42 | 17 | 22 | 1,886 | 1,854 | 690 | 3,725 | 2,327 | 2,087 | 1,957 | 1,219 | 1,176 |
| Elizabeth..... | 163 | 124 | 141 | 12,737 | 12,335 | 9,498 | 29,147 | 29,301 | 22,801 | 12,718 | 12,320 | 9,948 |
| Garfield borough..... | 25 | ..... | ..... | 2,530 | ..... | ..... | 8,894 | ..... | ..... | 2,619 | ..... | ..... |
| Hackensack town..... | 40 | 23 | 21 | 738 | 812 | 487 | 1,978 | 1,488 | 782 | 1,079 | 801 | 411 |
| Harrison town..... | 54 | 41 | 41 | 6,500 | 4,040 | 2,859 | 13,142 | 8,409 | 6,087 | 7,729 | 4,780 | 2,885 |
| Hoboken..... | 244 | 279 | 194 | 8,100 | 7,227 | 5,712 | 20,413 | 14,077 | 10,483 | 10,044 | 7,497 | 5,457 |
| Irvington town..... | 51 | ..... | ..... | 540 | ..... | ..... | 3,018 | ..... | ..... | 675 | ..... | ..... |

¹ Does not include statistics for Great Falls.

STATES, CITIES, AND INDUSTRIES.

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CITIES OF 10,000 INHABITANTS OR OVER—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE EARNERS, VALUE OF PRODUCTS, AND VALUE ADDED BY MANUFACTURE: 1909, 1904, AND 1899—Continued.

[See explanatory note on the first page of this table.]

Table 113—Continued.

| CITY. | NUMBER OF ESTABLISHMENTS. | | | AVERAGE NUMBER OF WAGE EARNERS. | | | VALUE OF PRODUCTS. | | | VALUE ADDED BY MANUFACTURE (VALUE OF PRODUCTS LESS COST OF MATERIALS). | | |
|-------------------------------|---------------------------|--------|--------|---------------------------------|---------|---------|-------------------------|-----------|-----------|--|----------|----------|
| | | | | | | | Expressed in thousands. | | | | | |
| | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 |
| NEW JERSEY—Continued. | | | | | | | | | | | | |
| Jersey City..... | 745 | 628 | 536 | 25,454 | 20,353 | 17,391 | \$128,775 | \$75,741 | \$72,930 | \$39,458 | \$26,942 | \$22,664 |
| Kearny town..... | 18 | 11 | 10 | 2,820 | 1,303 | 986 | 8,306 | 4,428 | 1,667 | 3,043 | 923 | 623 |
| Long Branch..... | 34 | 26 | 11 | 415 | 294 | 96 | 1,117 | 577 | 281 | 533 | 370 | 172 |
| Millville..... | 39 | 35 | 18 | 2,791 | 2,767 | 2,239 | 4,182 | 3,719 | 2,514 | 2,583 | 2,335 | 1,595 |
| Montclair town..... | 23 | 19 | 23 | 232 | 151 | 169 | 1,026 | 621 | 664 | 357 | 202 | 278 |
| Morristown town..... | 31 | 26 | 22 | 201 | 307 | 252 | 724 | 705 | 596 | 355 | 406 | 286 |
| New Brunswick..... | 93 | 71 | 72 | 5,204 | 4,590 | 3,836 | 10,005 | 8,917 | 5,791 | 3,436 | 4,759 | 2,797 |
| Newark..... | 1,858 | 1,600 | 1,573 | 59,955 | 50,697 | 42,878 | 202,511 | 159,055 | 112,728 | 87,832 | 69,366 | 51,966 |
| Orange..... | 85 | 66 | 74 | 4,383 | 2,450 | 1,640 | 9,176 | 6,151 | 2,966 | 5,486 | 3,569 | 1,416 |
| Passaic..... | 169 | 95 | 70 | 15,086 | 11,000 | 6,999 | 41,729 | 22,785 | 12,865 | 17,394 | 9,672 | 5,987 |
| Paterson..... | 702 | 513 | 487 | 32,004 | 28,509 | 28,542 | 69,584 | 54,673 | 48,512 | 34,856 | 27,232 | 23,447 |
| Perth Amboy..... | 80 | 53 | 47 | 3,856 | 3,950 | 2,005 | 73,083 | 34,800 | 14,001 | 9,161 | 4,364 | 2,714 |
| Phillipsburg town..... | 39 | 32 | 34 | 3,422 | 3,148 | 2,216 | 9,150 | 6,684 | 4,985 | 4,380 | 3,118 | 1,782 |
| Plainfield..... | 60 | 49 | 32 | 1,735 | 1,986 | 1,384 | 3,649 | 3,572 | 2,437 | 2,119 | 2,418 | 1,624 |
| Trenton..... | 340 | 311 | 246 | 18,543 | 14,130 | 13,188 | 69,099 | 32,590 | 28,458 | 21,398 | 14,809 | 11,877 |
| Union town..... | 83 | 77 | 57 | 2,894 | 1,856 | 1,876 | 7,941 | 3,512 | 3,403 | 4,402 | 2,129 | 1,995 |
| West Hoboken town..... | 137 | 95 | 65 | 2,782 | 3,502 | 2,733 | 6,577 | 5,947 | 4,799 | 3,089 | 2,825 | 2,240 |
| West New York town..... | 66 | | | 1,508 | | | 9,274 | | | 1,805 | | |
| West Orange town..... | 10 | | | 476 | | | 748 | | | 349 | | |
| NEW MEXICO: | | | | | | | | | | | | |
| Albuquerque..... | 31 | | | 587 | | | 1,286 | | | 704 | | |
| NEW YORK:¹ | | | | | | | | | | | | |
| Albany..... | 395 | 490 | 511 | 9,861 | 8,976 | 8,106 | 22,826 | 20,209 | 17,260 | 12,365 | 10,632 | 9,762 |
| Amsterdam..... | 97 | 89 | 98 | 10,284 | 7,993 | 6,261 | 22,449 | 15,097 | 10,643 | 9,254 | 6,154 | 4,983 |
| Auburn..... | 140 | 111 | 120 | 6,497 | 6,660 | 5,895 | 15,961 | 13,421 | 9,575 | 7,024 | 5,176 | 4,363 |
| Batavia village..... | 59 | 51 | 54 | 2,007 | 1,603 | 1,573 | 4,401 | 3,589 | 2,573 | 2,620 | 1,865 | 1,327 |
| Binghamton..... | 266 | 241 | 219 | 6,823 | 5,636 | 5,011 | 17,114 | 13,907 | 10,539 | 8,268 | 7,486 | 5,177 |
| Buffalo..... | 1,753 | 1,538 | 1,478 | 51,412 | 43,567 | 34,275 | 218,804 | 147,378 | 105,627 | 82,208 | 59,011 | 39,688 |
| Cohoes..... | 103 | 98 | 112 | 8,209 | 6,910 | 8,273 | 14,831 | 10,290 | 11,031 | 6,655 | 4,006 | 5,123 |
| Corning..... | 45 | 57 | 49 | 2,074 | 2,355 | 1,600 | 3,050 | 3,084 | 2,273 | 2,166 | 2,009 | 1,353 |
| Cortland..... | 51 | 53 | 45 | 2,356 | 2,282 | 1,412 | 6,395 | 4,574 | 3,064 | 2,821 | 1,976 | 1,266 |
| Dunkirk..... | 57 | 38 | 41 | 2,756 | 3,395 | 2,533 | 6,576 | 9,909 | 5,236 | 3,368 | 5,169 | 2,311 |
| Elmira..... | 154 | 142 | 144 | 3,647 | 3,208 | 3,570 | 8,067 | 6,308 | 5,567 | 4,477 | 3,587 | 2,695 |
| Fulton..... | 45 | | | 2,799 | | | 7,897 | | | 3,010 | | |
| Geneva..... | 56 | 54 | 49 | 1,526 | 1,580 | 1,180 | 5,154 | 4,952 | 2,716 | 2,162 | 1,556 | 1,066 |
| Glens Falls..... | 68 | 49 | 57 | 2,774 | 2,052 | 3,101 | 4,877 | 2,835 | 3,904 | 2,568 | 1,533 | 2,135 |
| Gloversville..... | 187 | 180 | 183 | 5,741 | 5,048 | 7,813 | 14,171 | 9,341 | 9,070 | 6,109 | 4,686 | 3,616 |
| Hornell..... | 45 | 45 | 48 | 2,183 | 2,200 | 1,549 | 3,648 | 3,163 | 2,431 | 1,770 | 1,699 | 1,123 |
| Hudson..... | 45 | 48 | 45 | 1,302 | 1,524 | 1,132 | 3,506 | 4,116 | 2,604 | 1,443 | 2,038 | 1,270 |
| Ithaca..... | 81 | 67 | 62 | 873 | 873 | 861 | 1,920 | 2,080 | 1,501 | 1,660 | 1,261 | 845 |
| Jamestown..... | 156 | 149 | 108 | 6,789 | 5,237 | 4,528 | 14,720 | 10,350 | 7,731 | 7,326 | 6,069 | 3,937 |
| Johnstown..... | 138 | 100 | 115 | 2,589 | 2,426 | 3,695 | 6,574 | 4,543 | 5,123 | 2,649 | 1,982 | 2,138 |
| Kingston..... | 99 | 96 | 109 | 3,281 | 2,636 | 2,042 | 5,986 | 4,812 | 3,952 | 3,404 | 2,700 | 2,049 |
| Little Falls..... | 55 | 49 | 52 | 4,211 | 2,621 | 2,980 | 8,460 | 4,471 | 4,071 | 3,537 | 1,936 | 1,638 |
| Lockport..... | 109 | 109 | 124 | 2,138 | 2,322 | 2,359 | 8,168 | 5,898 | 5,333 | 2,492 | 2,492 | 2,256 |
| Middletown..... | 59 | 50 | 51 | 1,733 | 1,596 | 1,396 | 4,658 | 3,356 | 2,155 | 1,753 | 1,400 | 830 |
| Mount Vernon..... | 90 | 54 | 37 | 1,207 | 670 | 438 | 3,376 | 1,877 | 910 | 1,092 | 582 | |
| Newburgh..... | 104 | 79 | 93 | 4,344 | 4,013 | 3,074 | 9,928 | 7,036 | 5,358 | 5,085 | 3,760 | 2,710 |
| New Rochelle..... | 42 | 28 | 25 | 735 | 517 | 198 | 1,669 | 1,103 | 508 | 855 | 641 | 230 |
| New York..... | 25,938 | 20,839 | 19,243 | 554,002 | 464,716 | 388,686 | 2,029,693 | 1,526,523 | 1,172,870 | 937,538 | 708,494 | 538,660 |
| Niagara Falls..... | 156 | 85 | 93 | 6,089 | 4,574 | 2,840 | 28,552 | 16,916 | 8,540 | 14,381 | 7,724 | 3,652 |
| North Tonawanda..... | 81 | 38 | 34 | 2,824 | 2,025 | 1,656 | 9,600 | 6,499 | 6,294 | 3,211 | 1,965 | 2,050 |
| Ogdensburg..... | 75 | 55 | 74 | 1,259 | 929 | 809 | 4,948 | 3,057 | 2,261 | 1,440 | 794 | 760 |
| Olean..... | 54 | 41 | 47 | 2,259 | 1,175 | 1,793 | 10,005 | 4,677 | 6,210 | 2,277 | 1,380 | 1,395 |
| Ossining village..... | 34 | | | 356 | | | 1,329 | | | 863 | | |
| Oswego..... | 81 | 77 | 75 | 3,817 | 3,746 | 3,457 | 10,413 | 7,582 | 7,487 | 4,310 | 2,875 | 3,175 |
| Peekskill village..... | 52 | 46 | 37 | 2,055 | 1,957 | 1,281 | 7,888 | 7,252 | 1,783 | 4,946 | 4,970 | 1,822 |
| Plattsburg..... | 41 | 39 | 39 | 1,049 | 750 | 621 | 3,137 | 1,057 | 1,043 | 1,392 | 547 | 519 |
| Port Chester village..... | 34 | | | 2,122 | | | 6,243 | | | 1,689 | | |
| Poughkeepsie..... | 111 | 108 | 118 | 3,299 | 3,775 | 2,810 | 9,151 | 7,207 | 5,576 | 5,284 | 3,674 | 2,585 |
| Rensselaer..... | 33 | | | 763 | | | 2,296 | | | 1,136 | | |
| Rochester..... | 1,203 | 1,109 | 1,221 | 39,108 | 31,779 | 28,049 | 112,676 | 81,109 | 59,609 | 62,002 | 43,191 | 31,424 |
| Rome..... | 119 | 89 | 87 | 3,633 | 3,209 | 2,274 | 14,423 | 8,631 | 5,549 | 4,219 | 2,937 | 2,087 |
| Saratoga Springs village..... | 39 | 35 | 44 | 833 | 590 | 602 | 2,337 | 1,709 | 1,334 | 1,454 | 1,007 | 656 |
| Schenectady..... | 124 | 103 | 83 | 14,931 | 14,316 | 8,494 | 38,165 | 33,084 | 17,605 | 16,213 | 16,587 | 7,680 |
| Syracuse..... | 738 | 637 | 630 | 18,148 | 14,554 | 11,809 | 49,435 | 34,687 | 26,546 | 27,609 | 18,606 | 13,998 |
| Troy..... | 363 | 311 | 327 | 20,020 | 19,114 | 22,933 | 37,980 | 31,961 | 28,739 | 22,354 | 18,115 | 17,277 |
| Utica..... | 317 | 333 | 311 | 13,153 | 10,882 | 8,898 | 31,199 | 22,890 | 16,479 | 14,553 | 10,106 | 8,265 |
| Watertown..... | 107 | 85 | 91 | 3,291 | 3,020 | 3,261 | 8,527 | 6,888 | 4,796 | 4,796 | 3,908 | 3,180 |
| Watervliet..... | 36 | 36 | 41 | 753 | 1,111 | 1,000 | 1,699 | 1,738 | 1,597 | 853 | 899 | 774 |
| White Plains village..... | 33 | | | 249 | | | 816 | | | 444 | | |
| Yonkers..... | 158 | 106 | 107 | 12,711 | 9,779 | 7,555 | 59,334 | 33,549 | 17,304 | 16,132 | 10,219 | 7,762 |
| NORTH CAROLINA: | | | | | | | | | | | | |
| Asheville..... | 52 | 45 | 37 | 964 | 732 | 804 | 3,250 | 1,918 | 1,300 | 955 | 671 | 479 |
| Charlotte..... | 108 | 73 | 57 | 4,199 | 2,234 | 2,787 | 10,460 | 4,850 | 4,187 | 3,929 | 1,981 | 1,863 |
| Durham..... | 61 | | | 3,718 | | | 23,271 | | | 13,461 | | |
| Greensboro..... | 61 | 63 | 43 | 952 | 1,098 | 677 | 2,081 | 1,744 | 926 | 1,190 | 575 | 514 |
| Raleigh..... | 55 | 42 | 39 | 1,023 | 585 | 549 | 2,376 | 1,687 | 947 | 1,102 | 1,189 | 891 |
| Wilmington..... | 64 | 53 | 50 | 1,213 | 1,594 | 1,553 | 3,005 | 2,904 | 2,353 | 9,882 | 7,510 | 2,355 |
| Winston..... | 52 | 47 | 30 | 6,708 | 4,850 | 2,894 | 16,778 | 11,353 | 4,858 | | | |
| NORTH DAKOTA: | | | | | | | | | | | | |
| Fargo..... | 61 | 47 | 36 | 510 | 386 | 307 | 2,477 | 1,161 | 1,231 | 1,067 | 606 | 448 |
| Grand Forks..... | 38 | | | 350 | | | 1,916 | | | 659 | | |

¹ Does not include statistics for Lackawanna.

ABSTRACT OF THE CENSUS—MANUFACTURES.

CITIES OF 10,000 INHABITANTS OR OVER—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE EARNERS, VALUE OF PRODUCTS, AND VALUE ADDED BY MANUFACTURE: 1909, 1904, AND 1899—Continued.

[See explanatory note on the first page of this table.]

| CITY. | NUMBER OF ESTABLISHMENTS. | | | AVERAGE NUMBER OF WAGE EARNERS. | | | VALUE OF PRODUCTS. | | | VALUE ADDED BY MANUFACTURE (VALUE OF PRODUCTS LESS COST OF MATERIALS). | | |
|----------------------------|---------------------------|-------|-------|---------------------------------|---------|---------|-------------------------|----------|----------|--|----------|---------|
| | | | | | | | Expressed in thousands. | | | | | |
| | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 |
| OHIO: | | | | | | | | | | | | |
| Akron..... | 246 | 186 | 178 | 15,831 | 9,626 | 8,259 | \$73,158 | \$33,550 | \$22,016 | \$30,087 | \$13,149 | \$9,296 |
| Alliance..... | 44 | 40 | 39 | 2,524 | 1,442 | 1,486 | 6,135 | 3,547 | 3,203 | 3,282 | 1,046 | 1,555 |
| Ashtabula..... | 44 | 36 | 29 | 1,471 | 846 | 873 | 3,459 | 1,895 | 884 | 1,375 | 899 | 357 |
| Bellair..... | 36 | 37 | 30 | 2,597 | 2,183 | 1,928 | 10,091 | 10,712 | 8,838 | 2,932 | 3,399 | 2,851 |
| Cambridge..... | 32 | 34 | 28 | 1,230 | 814 | 768 | 4,201 | 2,441 | 2,202 | 1,406 | 921 | 885 |
| Canton..... | 204 | 158 | 104 | 9,064 | 5,938 | 5,149 | 28,583 | 10,501 | 9,575 | 13,039 | 5,997 | 5,226 |
| Chillicothe..... | 57 | 64 | 46 | 1,074 | 1,553 | 1,112 | 4,345 | 3,147 | 1,016 | 1,307 | 1,219 | 738 |
| Cincinnati..... | 2,184 | 2,171 | 2,454 | 60,192 | 58,584 | 54,042 | 104,510 | 106,050 | 141,678 | 92,584 | 82,801 | 70,287 |
| Cleveland..... | 2,148 | 1,010 | 1,350 | 84,728 | 64,041 | 55,341 | 271,901 | 171,024 | 139,356 | 117,040 | 74,346 | 62,891 |
| Columbus..... | 586 | 459 | 408 | 10,428 | 14,850 | 13,787 | 49,032 | 39,530 | 34,748 | 23,828 | 20,286 | 16,496 |
| Dayton..... | 513 | 431 | 425 | 21,549 | 17,953 | 14,408 | 60,378 | 39,607 | 31,015 | 32,850 | 21,092 | 16,685 |
| East Liverpool..... | 82 | 81 | 75 | 4,873 | 5,228 | 4,171 | 6,629 | 6,437 | 4,749 | 4,108 | 4,330 | 3,286 |
| Elvira..... | 58 | 50 | 32 | 2,073 | 1,144 | 938 | 8,005 | 2,933 | 1,221 | 3,570 | 1,338 | 481 |
| Findlay..... | 74 | 71 | 80 | 1,370 | 1,343 | 1,107 | 3,487 | 2,925 | 1,680 | 1,893 | 1,346 | 935 |
| Hamilton..... | 125 | 113 | 97 | 6,895 | 6,107 | 5,147 | 18,184 | 13,811 | 10,650 | 8,544 | 7,427 | 5,653 |
| Ironton..... | 63 | 67 | 53 | 1,920 | 1,800 | 1,577 | 7,118 | 4,755 | 6,411 | 2,124 | 1,332 | 2,266 |
| Lancaster..... | 42 | 42 | 36 | 1,532 | 1,695 | 1,069 | 4,074 | 3,848 | 1,905 | 1,023 | 1,247 | 846 |
| Lima..... | 85 | 77 | 76 | 3,007 | 2,733 | 1,980 | 7,764 | 4,828 | 6,223 | 3,885 | 2,573 | 2,287 |
| Lorain..... | 57 | 43 | 20 | 6,697 | 3,102 | 2,233 | 38,987 | 14,491 | 6,481 | 14,765 | 4,733 | 2,996 |
| Mansfield..... | 121 | 109 | 95 | 3,204 | 3,021 | 2,622 | 8,173 | 7,354 | 6,070 | 3,817 | 3,831 | 3,371 |
| Marionetta..... | 66 | 73 | 77 | 1,288 | 1,314 | 1,511 | 3,214 | 2,509 | 2,308 | 1,427 | 1,233 | 1,248 |
| Marion..... | 55 | 47 | 34 | 2,619 | 1,721 | 1,171 | 5,667 | 3,228 | 2,420 | 3,090 | 1,876 | 1,460 |
| Massillon..... | 50 | 52 | 49 | 1,934 | 1,095 | 1,474 | 4,788 | 3,707 | 2,749 | 2,498 | 2,125 | 1,486 |
| Middletown..... | 41 | 47 | 41 | 2,576 | 1,814 | 1,578 | 10,517 | 8,538 | 5,800 | 8,507 | 4,846 | 3,327 |
| Newark..... | 72 | 78 | 69 | 3,913 | 3,627 | 2,075 | 7,851 | 5,613 | 2,879 | 3,869 | 3,180 | 1,669 |
| Norwood..... | 49 | ..... | ..... | 3,907 | ..... | ..... | 6,684 | ..... | ..... | 5,663 | ..... | ..... |
| Piqua..... | 82 | 76 | 68 | 2,683 | 2,044 | 1,955 | 6,931 | 4,036 | 5,552 | 3,079 | 2,128 | 1,942 |
| Portsmouth..... | 75 | 81 | 100 | 3,728 | 4,072 | 4,153 | 7,277 | 6,045 | 6,650 | 3,383 | 3,125 | 3,254 |
| Sandusky..... | 91 | 93 | 81 | 2,118 | 2,323 | 1,453 | 5,947 | 4,870 | 2,834 | 3,112 | 2,743 | 1,627 |
| Springfield..... | 195 | 157 | 164 | 7,405 | 6,258 | 6,299 | 10,246 | 13,382 | 12,116 | 10,327 | 7,620 | 6,827 |
| Staubenville..... | 55 | 72 | 54 | 4,207 | 4,184 | 1,773 | 21,187 | 12,370 | 4,547 | 6,744 | 4,127 | 2,141 |
| Tiffin..... | 75 | 87 | 75 | 1,632 | 1,645 | 1,238 | 3,254 | 2,434 | 1,902 | 2,002 | 1,494 | 1,094 |
| Toledo..... | 790 | 597 | 445 | 18,878 | 15,697 | 12,747 | 61,230 | 44,501 | 31,970 | 27,146 | 19,035 | 12,579 |
| Warren..... | 68 | 53 | 44 | 1,798 | 1,605 | 1,832 | 5,988 | 4,414 | 5,085 | 2,924 | 2,366 | 2,042 |
| Youngstown..... | 115 | 113 | 103 | 10,498 | 8,095 | 8,079 | 81,271 | 46,853 | 33,908 | 18,979 | 11,670 | 10,775 |
| Zanesville..... | 109 | 99 | 115 | 3,150 | 3,098 | 3,405 | 9,145 | 6,347 | 5,708 | 3,641 | 3,056 | 2,622 |
| OKLAHOMA: | | | | | | | | | | | | |
| Chickasha..... | 30 | ..... | ..... | 364 | ..... | ..... | 1,867 | ..... | ..... | 582 | ..... | ..... |
| Enid..... | 65 | ..... | ..... | 303 | ..... | ..... | 2,453 | ..... | ..... | 646 | ..... | ..... |
| Guthrie..... | 34 | 34 | 33 | 282 | 333 | 241 | 1,443 | 1,200 | 640 | 496 | 490 | 312 |
| MoAlestor..... | 20 | ..... | ..... | 180 | ..... | ..... | 451 | ..... | ..... | 256 | ..... | ..... |
| Muskogee..... | 64 | ..... | ..... | 381 | ..... | ..... | 2,279 | ..... | ..... | 801 | ..... | ..... |
| Oklahoma City..... | 171 | 89 | 30 | 1,398 | 720 | 220 | 7,868 | 3,071 | 845 | 2,722 | 1,309 | 328 |
| Shawnee..... | 40 | ..... | ..... | 1,014 | ..... | ..... | 2,081 | ..... | ..... | 918 | ..... | ..... |
| Tulsa..... | 53 | ..... | ..... | 492 | ..... | ..... | 1,563 | ..... | ..... | 689 | ..... | ..... |
| OREGON: | | | | | | | | | | | | |
| Portland..... | 649 | 437 | 408 | 12,214 | 8,171 | 5,380 | 46,861 | 28,651 | 16,904 | 20,785 | 11,627 | 6,727 |
| Salem..... | 62 | ..... | ..... | 597 | ..... | ..... | 2,208 | ..... | ..... | 1,031 | ..... | ..... |
| PENNSYLVANIA: | | | | | | | | | | | | |
| Allentown..... | 274 | 257 | 216 | 11,481 | 8,984 | 7,355 | 26,203 | 16,841 | 14,000 | 10,682 | 6,968 | 6,013 |
| Altoona..... | 44 | 73 | 57 | 8,409 | 9,540 | 6,573 | 10,763 | 14,350 | 11,273 | 7,629 | 7,102 | 4,390 |
| Beaver Falls borough..... | 44 | 42 | 47 | 2,180 | 2,232 | 2,174 | 6,400 | 4,008 | 6,220 | 3,385 | 2,666 | 2,370 |
| Bethlehem borough..... | 49 | ..... | ..... | 1,583 | ..... | ..... | 3,712 | ..... | ..... | 1,382 | ..... | ..... |
| Braddock borough..... | 41 | 38 | 30 | 1,040 | 1,225 | 815 | 5,094 | 4,125 | 4,091 | 1,747 | 1,387 | 1,526 |
| Bradford..... | 82 | 80 | 65 | 1,318 | 1,490 | 1,200 | 3,887 | 3,102 | 3,125 | 1,445 | 1,599 | 1,490 |
| Butler borough..... | 61 | 48 | 41 | 2,823 | 2,093 | 702 | 11,058 | 8,932 | 1,403 | 3,464 | 2,172 | 833 |
| Carbondale..... | 34 | 32 | 26 | 1,503 | 1,475 | 1,023 | 2,523 | 2,310 | 1,146 | 1,270 | 1,203 | 676 |
| Carlisle borough..... | 50 | 45 | 39 | 1,334 | 1,340 | 1,121 | 2,490 | 1,986 | 1,708 | 1,065 | 857 | 661 |
| Carnegie borough..... | 19 | ..... | ..... | 422 | ..... | ..... | 3,099 | ..... | ..... | 658 | ..... | ..... |
| Chambersburg borough..... | 57 | 47 | 44 | 1,364 | 843 | 612 | 2,450 | 1,085 | 815 | 1,280 | 510 | 337 |
| Chester..... | 128 | 131 | 121 | 6,986 | 7,061 | 6,972 | 19,373 | 10,045 | 14,940 | 7,707 | 6,223 | 6,369 |
| Columbia borough..... | 47 | 44 | 53 | 2,773 | 3,034 | 2,519 | 4,807 | 3,887 | 4,214 | 2,136 | 1,484 | 1,642 |
| Connellsville borough..... | 39 | ..... | ..... | 1,035 | ..... | ..... | 1,971 | ..... | ..... | 1,154 | ..... | ..... |
| Dubois borough..... | 37 | 34 | 24 | 1,015 | 1,057 | 817 | 1,890 | 2,607 | 1,708 | 1,064 | 882 | 615 |
| Dunmore borough..... | 18 | 15 | 18 | 1,308 | 1,133 | 614 | 1,851 | 1,460 | 1,132 | 1,181 | 910 | 642 |
| Easton..... | 126 | 97 | 100 | 3,888 | 2,720 | 3,202 | 6,015 | 5,069 | 5,425 | 3,401 | 2,375 | 2,232 |
| Erie..... | 391 | 261 | 260 | 9,796 | 8,415 | 8,032 | 24,226 | 18,039 | 16,493 | 12,162 | 9,212 | 8,285 |
| Greensburg borough..... | 47 | ..... | ..... | 310 | ..... | ..... | 726 | ..... | ..... | 396 | ..... | ..... |
| Harrisburg..... | 199 | 175 | 175 | 9,743 | 7,955 | 6,439 | 22,725 | 16,571 | 14,996 | 8,642 | 6,244 | 5,991 |
| Hazleton..... | 77 | 62 | 45 | 2,682 | 1,406 | 822 | 4,707 | 2,186 | 999 | 2,905 | 1,056 | 706 |
| Homestead borough..... | 26 | 27 | 15 | 171 | 307 | 164 | 650 | 713 | 290 | 337 | 443 | 165 |
| Johnstown..... | 97 | 82 | 66 | 10,574 | 6,914 | 5,600 | 48,106 | 28,892 | 21,305 | 15,768 | 9,137 | 7,457 |
| Lancaster..... | 305 | 300 | 284 | 7,957 | 8,693 | 7,504 | 15,979 | 14,648 | 12,750 | 7,138 | 6,297 | 6,297 |
| Lebanon..... | 109 | 103 | 97 | 5,591 | 4,387 | 4,475 | 11,429 | 9,978 | 7,653 | 4,651 | 3,609 | 2,913 |
| McKeesport..... | 68 | 75 | 67 | 8,246 | 8,848 | 7,213 | 42,405 | 23,054 | 36,058 | 16,199 | 10,744 | 14,223 |
| McKees Rocks borough..... | 31 | ..... | ..... | 3,591 | ..... | ..... | 9,787 | ..... | ..... | 4,380 | ..... | ..... |
| Mahanoy City borough..... | 33 | 29 | 29 | 590 | 238 | 301 | 868 | 431 | 401 | 456 | 298 | 288 |
| Meadville..... | 62 | 52 | 46 | 2,048 | 1,300 | 1,201 | 3,559 | 2,075 | 1,698 | 1,843 | 1,111 | 779 |
| Mount Carmel borough..... | 20 | 10 | 9 | 600 | 107 | 100 | 785 | 620 | 393 | 869 | 193 | 133 |
| Nanticoke borough..... | 17 | 12 | 17 | 348 | 229 | 140 | 423 | 358 | 310 | 243 | 198 | 128 |
| New Castle..... | 82 | 71 | 71 | 5,339 | 5,433 | 4,520 | 38,038 | 28,923 | 20,010 | 7,964 | 7,711 | 6,870 |
| Norristown borough..... | 111 | 84 | 77 | 3,818 | 3,517 | 2,944 | 7,413 | 5,925 | 4,107 | 4,139 | 3,058 | 1,948 |
| Oil City..... | 34 | 36 | 42 | 1,338 | 1,557 | 1,683 | 4,122 | 3,082 | 5,164 | 1,822 | 1,748 | 1,476 |
| Philadelphia..... | 8,379 | 7,087 | 7,503 | 251,884 | 228,899 | 214,775 | 746,076 | 501,388 | 519,082 | 310,984 | 258,036 | 224,807 |
| Phoenixville borough..... | 31 | 31 | 32 | 2,599 | 2,888 | 3,229 | 5,876 | 5,500 | 3,229 | 2,159 | 2,477 | 1,475 |
| Pittsburgh..... | 1,659 | 1,562 | 1,301 | 67,474 | 71,618 | 71,794 | 243,454 | 211,250 | 218,198 | 94,927 | 80,678 | 89,740 |
| Pittston..... | 40 | 40 | 27 | 792 | 830 | 357 | 1,960 | 1,475 | 998 | 902 | 747 | 375 |

1 Does not include statistics for Lakewood.

2 While the population for 1900 was in excess of 10,000, statistics for that census are not available.

STATES, CITIES, AND INDUSTRIES.

535

CITIES OF 10,000 INHABITANTS OR OVER—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE EARNERS, VALUE OF PRODUCTS, AND VALUE ADDED BY MANUFACTURE: 1903, 1904, AND 1899—Continued.

[See explanatory note on the first page of this table.]

Table 113—Continued.

| CITY. | NUMBER OF ESTABLISHMENTS. | | | AVERAGE NUMBER OF WAGE EARNERS. | | | VALUE OF PRODUCTS. | | | VALUE ADDED BY MANUFACTURE (VALUE OF PRODUCTS LESS COST OF MATERIALS). | | |
|-------------------------------------|---------------------------|------|------|---------------------------------|--------|--------|-------------------------|--------|--------|--|--------|--------|
| | | | | | | | Expressed in thousands. | | | | | |
| | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 |
| PENNSYLVANIA—Continued. | | | | | | | | | | | | |
| Plymouth borough..... | 23 | 23 | 24 | 908 | 827 | 756 | \$1,179 | \$860 | \$533 | \$475 | \$413 | \$292 |
| Pottstown borough..... | 78 | 77 | 65 | 3,650 | 3,457 | 2,681 | 12,505 | 8,145 | 7,357 | 2,506 | 2,707 | 2,513 |
| Pottsville borough..... | 91 | 79 | 77 | 2,872 | 1,904 | 1,699 | 9,138 | 5,806 | 4,830 | 3,211 | 1,781 | 1,400 |
| Reading..... | 432 | 402 | 403 | 24,145 | 18,053 | 16,892 | 51,135 | 30,491 | 32,682 | 21,287 | 13,782 | 13,686 |
| Scranton..... | 203 | 258 | 247 | 12,851 | 10,912 | 11,139 | 26,385 | 29,453 | 24,742 | 12,083 | 9,200 | 7,522 |
| Shamokin borough..... | 39 | 48 | 46 | 1,623 | 897 | 762 | 3,544 | 1,444 | 1,147 | 1,415 | 418 | 447 |
| Sharon borough..... | 45 | 37 | 35 | 3,316 | 1,812 | 1,827 | 9,881 | 5,671 | 3,765 | 2,198 | 1,880 | 1,561 |
| Shenandoah borough..... | 29 | 30 | 22 | 242 | 170 | 107 | 888 | 595 | 302 | 552 | 414 | 298 |
| South Bethlehem borough..... | 49 | 46 | 38 | 7,985 | 5,754 | 4,645 | 28,417 | 15,275 | 9,964 | 10,450 | 8,014 | 5,192 |
| Steelton borough ¹ | | 18 | 18 | | 4,656 | 4,762 | | 15,746 | 14,034 | | 4,996 | 4,098 |
| Sunbury borough..... | 39 | 32 | 29 | 2,069 | 1,457 | 968 | 4,450 | 2,593 | 1,908 | 2,222 | 801 | 710 |
| Uniontown borough..... | 41 | | | 335 | | | 1,347 | | | 968 | | |
| Warren borough..... | 72 | 63 | 43 | 1,489 | 1,174 | 1,060 | 5,744 | 4,666 | 3,681 | 2,068 | 1,947 | 1,527 |
| Washington borough..... | 75 | | | 2,126 | | | 4,837 | | | 2,390 | | |
| West Chester borough..... | 35 | 35 | 35 | 916 | 849 | 497 | 2,146 | 2,121 | 859 | 1,479 | 1,447 | 543 |
| Wilkes-Barre..... | 176 | 129 | 138 | 7,553 | 5,920 | 4,749 | 13,526 | 11,000 | 8,617 | 7,093 | 5,735 | 4,308 |
| Wilkesburg borough..... | 24 | 30 | 16 | 185 | 184 | 100 | 538 | 472 | 246 | 276 | 237 | 120 |
| Williamsport..... | 159 | 115 | 142 | 5,641 | 5,296 | 4,717 | 13,348 | 11,367 | 9,726 | 6,298 | 5,391 | 4,125 |
| York..... | 218 | 228 | 241 | 10,492 | 7,952 | 6,851 | 18,622 | 13,333 | 10,560 | 9,756 | 6,833 | 5,190 |
| All other cities ² | 99 | | | 18,283 | | | 106,288 | | | 25,328 | | |
| RHODE ISLAND: | | | | | | | | | | | | |
| Central Falls..... | 43 | 33 | 36 | 2,475 | 2,443 | 2,372 | 5,471 | 5,091 | 4,511 | 2,090 | 1,761 | 1,785 |
| Cranston..... | 28 | 13 | 13 | 1,711 | 587 | 493 | 5,625 | 1,639 | 1,403 | 2,735 | 1,643 | 790 |
| Cumberland town..... | 29 | 19 | 10 | 5,359 | 4,574 | 1,500 | 9,827 | 5,905 | 1,726 | 5,299 | 2,858 | 1,154 |
| East Providence town..... | 26 | 21 | 15 | 2,041 | 1,381 | 836 | 7,146 | 5,544 | 5,347 | 2,086 | 1,290 | 1,009 |
| Newport..... | 54 | 46 | 43 | 726 | 849 | 881 | 1,379 | 1,347 | 1,375 | 899 | 791 | 922 |
| Pawtucket..... | 217 | 185 | 191 | 15,275 | 12,054 | 10,712 | 37,696 | 25,847 | 19,272 | 19,150 | 11,735 | 9,265 |
| Providence..... | 1,080 | 881 | 929 | 46,381 | 39,804 | 38,368 | 120,241 | 91,951 | 78,657 | 55,471 | 42,006 | 36,106 |
| Warwick town..... | 49 | 37 | 27 | 6,471 | 6,153 | 5,465 | 10,589 | 7,032 | 6,020 | 5,195 | 3,294 | 2,579 |
| Woonsocket..... | 130 | 103 | 104 | 10,703 | 8,672 | 7,591 | 28,218 | 19,261 | 14,745 | 11,456 | 8,682 | 7,576 |
| SOUTH CAROLINA: | | | | | | | | | | | | |
| Charleston..... | 116 | 108 | 104 | 2,874 | 3,450 | 3,187 | 6,951 | 6,007 | 5,713 | 2,722 | 2,299 | 2,296 |
| Columbia..... | 55 | 41 | 41 | 2,522 | 2,353 | 2,091 | 5,672 | 4,677 | 3,134 | 2,294 | 2,095 | 1,396 |
| Greenville..... | 41 | 36 | 22 | 1,182 | 1,204 | 770 | 2,142 | 1,677 | 967 | 914 | 578 | 249 |
| Spartanburg..... | 36 | 35 | 28 | 1,773 | 1,650 | 1,361 | 3,276 | 2,127 | 1,591 | 1,191 | 583 | 685 |
| SOUTH DAKOTA: | | | | | | | | | | | | |
| Aberdeen..... | 37 | | | 295 | | | 1,575 | | | 564 | | |
| Sioux Falls..... | 83 | 61 | 48 | 677 | 465 | 311 | 2,899 | 1,898 | 884 | 1,290 | 832 | 562 |
| TENNESSEE: | | | | | | | | | | | | |
| Chattanooga..... | 185 | 177 | 149 | 6,410 | 6,420 | 4,729 | 16,036 | 14,261 | 10,518 | 7,602 | 6,787 | 4,097 |
| Jackson..... | 42 | 42 | 33 | 1,405 | 1,268 | 1,018 | 2,710 | 2,318 | 1,577 | 1,495 | 1,135 | 884 |
| Knoxville..... | 159 | 138 | 102 | 2,773 | 2,999 | 4,203 | 8,149 | 6,699 | 6,202 | 3,043 | 2,598 | 2,659 |
| Memphis..... | 329 | 299 | 223 | 7,927 | 7,374 | 6,626 | 30,242 | 29,043 | 14,233 | 12,391 | 9,704 | 6,354 |
| Nashville..... | 384 | 257 | 237 | 9,721 | 8,032 | 6,726 | 29,650 | 21,567 | 15,391 | 12,194 | 9,095 | 6,274 |
| TEXAS: | | | | | | | | | | | | |
| Austin..... | 108 | 62 | 84 | 754 | 641 | 495 | 2,845 | 1,599 | 765 | 1,218 | 798 | 393 |
| Beaumont..... | 56 | 40 | 30 | 863 | 732 | 1,005 | 4,831 | 2,610 | 1,913 | 1,387 | 1,098 | 816 |
| Brownsville..... | 9 | | | 51 | | | 121 | | | 75 | | |
| Cleburne..... | 24 | | | 825 | | | 1,577 | | | 718 | | |
| Dallas..... | 305 | 247 | 177 | 4,882 | 3,445 | 2,842 | 28,959 | 15,028 | 9,488 | 9,993 | 6,421 | 4,090 |
| Denison..... | 29 | 25 | 29 | 833 | 725 | 668 | 1,314 | 1,235 | 840 | 721 | 644 | 461 |
| El Paso..... | 88 | 54 | 38 | 1,752 | 1,158 | 716 | 3,637 | 2,378 | 1,213 | 2,141 | 1,247 | 674 |
| Fort Worth..... | 147 | 102 | 68 | 2,059 | 1,423 | 943 | 8,661 | 5,668 | 3,488 | 3,295 | 2,479 | 1,341 |
| Galveston..... | 81 | 67 | 100 | 1,094 | 761 | 1,422 | 6,308 | 2,997 | 3,675 | 2,041 | 1,398 | 1,050 |
| Houston..... | 249 | 209 | 145 | 5,338 | 5,056 | 3,188 | 23,015 | 13,564 | 7,492 | 8,694 | 5,947 | 3,297 |
| Laredo..... | 23 | 18 | 14 | 213 | 515 | 372 | 221 | 454 | 331 | 147 | 258 | 192 |
| Marshall..... | 22 | | | 977 | | | 1,787 | | | 864 | | |
| Marshall..... | 20 | 17 | 19 | 745 | 544 | 481 | 1,313 | 735 | 704 | 691 | 430 | 355 |
| Palestine..... | 45 | 29 | 27 | 541 | 210 | 263 | 1,430 | 855 | 743 | 568 | 327 | 282 |
| Paris..... | 26 | | | 115 | | | 318 | | | 185 | | |
| San Angelo..... | 194 | 141 | 113 | 3,105 | 2,457 | 2,683 | 13,435 | 7,492 | 5,989 | 6,483 | 3,661 | 3,028 |
| San Antonio..... | 36 | 39 | 31 | 273 | 307 | 314 | 4,676 | 2,641 | 1,461 | 629 | 492 | 391 |
| Sherman..... | 37 | | | 366 | | | 1,346 | | | 512 | | |
| Temple..... | 23 | 21 | 16 | 454 | 368 | 431 | 996 | 629 | 682 | 459 | 318 | 230 |
| Tyler..... | 92 | 76 | 80 | 1,033 | 947 | 1,004 | 4,769 | 2,960 | 2,294 | 1,804 | 1,201 | 908 |
| Waco..... | | | | | | | | | | | | |
| UTAH: | | | | | | | | | | | | |
| Ogden..... | 68 | 63 | 51 | 1,323 | 1,013 | 678 | 3,713 | 2,807 | 1,242 | 1,648 | 1,109 | 563 |
| Salt Lake City..... | 245 | 192 | 154 | 4,287 | 2,776 | 2,154 | 13,351 | 7,544 | 4,379 | 6,736 | 4,629 | 2,302 |
| VERMONT: | | | | | | | | | | | | |
| Barre..... | 139 | 105 | 146 | 2,340 | 2,198 | 1,875 | 3,852 | 3,373 | 2,761 | 2,744 | 2,464 | 1,958 |
| Burlington..... | 82 | 67 | 78 | 2,371 | 2,300 | 2,232 | 6,800 | 6,356 | 6,066 | 2,477 | 2,552 | 2,772 |
| Rutland..... | 63 | 51 | 61 | 1,636 | 1,803 | 1,496 | 2,680 | 2,823 | 1,989 | 1,475 | 1,361 | 1,124 |
| VIRGINIA:³ | | | | | | | | | | | | |
| Alexandria..... | 54 | 51 | 57 | 1,470 | 1,291 | 859 | 4,430 | 2,187 | 1,520 | 1,689 | 1,195 | 809 |
| Danville..... | 52 | 34 | 46 | 2,076 | 3,018 | 2,933 | 5,389 | 4,775 | 3,694 | 2,153 | 2,009 | 1,827 |
| Lynchburg..... | 82 | 55 | 61 | 4,026 | 2,534 | 1,487 | 10,188 | 4,965 | 2,994 | 3,720 | 2,082 | 1,499 |
| Norfolk..... | 215 | 121 | 140 | 4,749 | 2,935 | 2,638 | 10,341 | 5,739 | 4,682 | 4,859 | 2,537 | 2,150 |
| Petersburg..... | 72 | 72 | 77 | 3,887 | 3,288 | 3,608 | 8,896 | 5,861 | 5,293 | 3,137 | 2,097 | 2,178 |
| Portsmouth..... | 31 | 28 | 22 | 842 | 551 | 471 | 1,538 | 945 | 960 | 752 | 499 | 346 |
| Richmond..... | 380 | 300 | 276 | 14,849 | 12,444 | 13,715 | 47,358 | 27,745 | 24,669 | 23,106 | 13,982 | 13,154 |
| Roanoke..... | 62 | 54 | 38 | 3,544 | 3,089 | 2,431 | 7,261 | 5,545 | 5,396 | 3,217 | 2,513 | 1,806 |
| Staunton..... | 44 | | | 339 | | | 1,223 | | | 327 | | |

¹ Included in "all other cities" for 1909.² Includes: Coatesville, Duquesne, Monessen, North Braddock, Old Forge, South Sharon, and Steelton boroughs, to avoid disclosure of individual operations.³ Does not include statistics for Newport News.

ABSTRACT OF THE CENSUS—MANUFACTURES.

CITIES OF 10,000 INHABITANTS OR OVER—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE EARNERS, VALUE OF PRODUCTS, AND VALUE ADDED BY MANUFACTURE: 1909, 1904, AND 1899—Continued.

[See explanatory note on the first page of this table.]

| CITY. | NUMBER OF ESTABLISHMENTS. | | | AVERAGE NUMBER OF WAGE EARNERS. | | | VALUE OF PRODUCTS. | | | VALUE ADDED BY MANUFACTURE (VALUE OF PRODUCTS LESS COST OF MATERIALS). | | |
|-------------------------------------|---------------------------|-------|-------|---------------------------------|--------|--------|-------------------------|---------|---------|--|---------|---------|
| | | | | | | | Expressed in thousands. | | | | | |
| | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 | 1909 | 1904 | 1899 |
| WASHINGTON: | | | | | | | | | | | | |
| Aberdeen..... | 43 | | | 1,509 | | | \$3,590 | | | \$1,418 | | |
| Bellingham..... | 96 | 73 | 47 | 1,566 | 1,314 | 1,502 | 4,000 | \$3,294 | \$2,020 | 2,178 | | |
| Everett..... | 94 | | | 2,375 | | | 7,423 | | | 3,564 | \$1,043 | \$1,076 |
| North Yakima..... | 36 | | | 602 | | | 2,175 | | | 1,225 | | |
| Seattle..... | 751 | 407 | 352 | 11,331 | 6,390 | 4,440 | 50,560 | 25,406 | 15,323 | 21,884 | 11,048 | 6,459 |
| Spokane..... | 286 | 188 | 84 | 3,989 | 2,428 | 1,060 | 18,880 | 8,831 | 3,756 | 8,637 | 4,131 | 1,723 |
| Tacoma..... | 276 | 236 | 174 | 5,765 | 4,457 | 3,552 | 22,450 | 14,264 | 10,301 | 8,734 | 6,107 | 3,980 |
| Walla Walla..... | 48 | 33 | 34 | 388 | 242 | 213 | 2,317 | 1,486 | 904 | 932 | 557 | 343 |
| WEST VIRGINIA: | | | | | | | | | | | | |
| Bluefield..... | 15 | | | 670 | | | 1,465 | | | 576 | | |
| Charleston..... | 63 | 54 | 48 | 951 | 887 | 686 | 3,235 | 2,101 | 1,262 | 1,098 | 1,103 | 603 |
| Huntington..... | 67 | 44 | 29 | 3,156 | 2,229 | 1,717 | 6,611 | 4,407 | 3,642 | 3,129 | 1,781 | 1,144 |
| Martinsburg..... | 39 | | | 1,420 | | | 2,616 | | | 1,239 | | |
| Parkersburg..... | 75 | 68 | 72 | 1,495 | 1,444 | 1,237 | 5,499 | 3,778 | 3,101 | 1,939 | 1,290 | 1,215 |
| Wheeling..... | 176 | 195 | 178 | 7,809 | 7,127 | 6,190 | 27,077 | 21,797 | 15,074 | 11,052 | 9,308 | 6,668 |
| WISCONSIN: | | | | | | | | | | | | |
| Appleton..... | 97 | 108 | 88 | 2,125 | 2,486 | 1,561 | 6,734 | 6,673 | 3,861 | 2,477 | 2,647 | 1,504 |
| Ashland..... | 38 | 37 | 41 | 1,116 | 1,301 | 1,812 | 2,748 | 4,210 | 3,600 | 1,262 | 2,018 | 2,084 |
| Beloit..... | 51 | 44 | 43 | 2,086 | 2,471 | 1,845 | 5,886 | 4,485 | 2,800 | 3,447 | 2,650 | 1,462 |
| Eau Claire..... | 75 | 73 | 64 | 2,524 | 1,985 | 1,758 | 5,855 | 3,602 | 3,876 | 2,881 | 1,803 | 1,764 |
| Fond du Lac..... | 97 | 85 | 74 | 2,707 | 2,566 | 1,520 | 5,227 | 5,600 | 2,861 | 3,153 | 2,289 | 1,226 |
| Green Bay..... | 102 | 103 | 79 | 2,579 | 2,111 | 1,427 | 6,235 | 4,873 | 2,769 | 2,342 | 2,177 | 1,346 |
| Janesville..... | 78 | 73 | 72 | 1,451 | 1,348 | 1,398 | 5,156 | 3,846 | 3,184 | 2,279 | 1,790 | 1,415 |
| Kenosha..... | 62 | 45 | 38 | 6,449 | 4,354 | 3,090 | 23,182 | 12,363 | 7,334 | 8,409 | 4,971 | 2,311 |
| La Crosse..... | 151 | 150 | 131 | 3,329 | 2,644 | 2,763 | 14,103 | 8,139 | 7,077 | 6,306 | 3,414 | 3,032 |
| Madison..... | 116 | 84 | 69 | 1,792 | 1,476 | 1,365 | 5,467 | 3,291 | 2,689 | 3,130 | 1,998 | 1,551 |
| Manitowish..... | 80 | 70 | 62 | 1,525 | 1,321 | 975 | 5,939 | 4,428 | 1,935 | 1,976 | 1,488 | 1,099 |
| Marinette..... | 43 | 37 | 45 | 1,401 | 1,645 | 2,485 | 3,309 | 3,633 | 4,411 | 1,606 | 2,052 | 2,697 |
| Milwaukee..... | 1,764 | 1,527 | 1,419 | 59,502 | 43,306 | 41,220 | 208,324 | 137,905 | 110,854 | 87,703 | 66,802 | 51,160 |
| Oshkosh..... | 159 | 134 | 129 | 5,778 | 4,840 | 4,226 | 14,739 | 8,652 | 8,081 | 7,658 | 4,220 | 3,799 |
| Racine..... | 142 | 148 | 135 | 8,381 | 6,504 | 6,138 | 24,673 | 16,459 | 11,076 | 13,161 | 9,316 | 5,750 |
| Sheboygan..... | 109 | 96 | 80 | 5,988 | 5,903 | 4,992 | 11,299 | 9,751 | 6,907 | 5,210 | 4,198 | 3,195 |
| Superior..... | 99 | 72 | 75 | 1,847 | 1,343 | 1,765 | 6,574 | 6,357 | 6,836 | 2,302 | 1,709 | 1,810 |
| Wausau..... | 67 | 58 | 56 | 2,092 | 1,945 | 1,716 | 6,287 | 4,645 | 3,381 | 2,962 | 2,096 | 1,473 |
| WYOMING: | | | | | | | | | | | | |
| Cheyenne..... | 22 | 18 | 17 | 853 | 552 | 423 | 1,577 | 925 | 722 | 970 | 617 | 433 |
| All other cities ¹ | 142 | 54 | 71 | 10,331 | 8,401 | 6,802 | 82,537 | 22,346 | 15,272 | 22,218 | 11,389 | 6,666 |

¹ Includes Gary, Ind., Great Falls, Mont., Lackawanna, N. Y., Lakewood, Ohio, and Newport News, Va., in 1909, and Great Falls, Mont., and Newport News, Va. in 1904 and 1899.